NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

WORKFORCE ASSESSMENT

APRIL 2009



PREPARING THE WORKFORCE FOR THE NEXT DECADE

Assessment prepared by

University of Mary Management 700 Seminar Class January – April 2009

Seminar Members

Arndorfer, Seth

Besmer, Scott

Boese, Dyke

Dallman, Tom

Dunbar, Lynette

Ellefson, Shawn

Emineth, LaDonna

Fettig, Brian

Finkbeiner, Lacey

Goodmanson, Trampas

Haman, Amber

Johnson, Steve

Keator, Gail

Lakoduk-Emst, Stacie Lee

Lowe, Barbara

Roerick, Daryl

Sandy, Blair

Schmitz, Janel

Zimmerman, Mary

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- Ken Heitkamp and NDDOT Human Resource staff members
- Clark Johnson, Associate Graduate Faculty

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Executive Summary

The seminar team reviewed the Employee Goals established in the 2008-2013 North Dakota Department of Transportation (NDDOT) Strategic Plan. The Employee Goal is to "enhance employee recruitment, development, and well being." (2008-2013 North Dakota Department of Transportation Strategic Plan). In pursuit of this goal, the NDDOT has identified five key objectives.

Objective 4.1: Develop an ongoing employee recruitment and retention program.

Objective 4.2: Develop ongoing professional growth and development programs for employees and emphasizing quality products and services.

Objective 4.3: Review and enhance health and wellness programs.

Objective 4.4: Develop and implement a Workforce Assessment plan.

Objective 4.5: Continue to improve work facilities.

The team was asked to review Objectives 4.1 - 4.4, with special emphasis on objective 4.4. Each objective includes specific recommendations for the objective. Objectives 4.1, 4.2, and 4.3 each have recommendations related to achieving Objective 4.4, and those are detailed in the individual sections, as well as under Objective 4.4.

In 2006, the State Auditor's Office released a Workforce Assessment Plan geared toward state agencies in Texas in its assessment of future needs. This is the foundation for recommendations for Objective 4.4.

Two activities should begin immediately in order to complete a Workforce Assessment Plan by 2013.

- 1. Establish the vision for the NDDOT of 2013. While objectives are in place, the thought process addressing types of employees required, education level, and the impact of technology needs to be defined. Additionally, workforce realities such as addressing the increase of ethnicity should be included in this vision. This vision of NDDOT of 2013 must be complete in order to identify the gaps that must be addressed in the next 3-1/2 years.
- 2. Consistent data collection is necessary in order to accurately assess the status of the workforce. Research found numerous areas that could benefit from structured evaluation programs. The team recommends that one year of consistent data collection be completed so objective data may be utilized in tandem with the subjective employee survey completed every two years in determining the current status of employees. An accurate picture of the current workforce situation is required in order to complete the next step which is to identify the gaps in knowledge, skills, and abilities for a prepared NDDOT in 2013.

Objective 4.1 "Develop an ongoing employee recruitment and retention program" (2008-2013 North Dakota Department of Transportation Strategic Plan).

Approach

Data available from the NDDOT was assessed. A NDDOT employee primarily responsible with recruiting participated in face-to-face interviews with two team members.

Other entities were interviewed and policies reviewed in an effort to draw comparisons in the comparative research portion of this analysis. This analysis consists of external demographic information that impacts the recruitment and retention of employees, wage comparisons, and summaries of external interviews from four local private firms that employ staff with similar job titles and job duties.

Workforce Assessment

This workforce assessment consists of NDDOT demographic information based on location, age, and turnover. This analysis summarizes benefits available to employees, an interview with a NDDOT employee primarily responsible for recruiting and elements of the 2008 employee satisfaction survey as related to recruitment and retention.

At the time of this report, there are 1,011 regular employees within the NDDOT, and they are located in eight locations. Bismarck has 545 (54 percent), Devils Lake has 72 (seven percent), Dickinson has 57 (six percent), Fargo has 84 (eight percent), Grand Forks has 72 (seven percent), Minot has 63 (six percent), Valley City has 71 (seven percent), and Williston has 47 (five percent). Seven of these employees are part-time, with the balance employed full-time. Not included in these numbers are seasonal workers, interns, and temporary contracted employees. (Employee wage and demographic report provided by NDDOT HR Employee, February 15, 2009)

There are currently four generations of workers within the NDDOT. The "Warbaby" or "Traditionalists" consist of those employees born between 1920 and 1945 or ages 64-89. "Baby Boomers" are employees born between 1946 and 1959 or ages 50-63. "Generation X" are employees born between 1960 and 1979 or ages 30-49. "Generation Y" are the youngest employees, born between 1980 and 1999 and are under 30 years old. The average age is 47 years, with 72 percent of the workforce being over 41 years of age. Of these 1,011 employees, 255 will reach or have reached the retirement rule of 85 within the next three years. This constitutes 25 percent of the workforce (NDDOT Employee Demographics, January 9, 2009).

Approximately 25 percent of the workforce is female, however only 18.5 percent of the workers under 40 are female. This indicates an under representation of females within the NDDOT. Also under represented are Native Americans, as this group comprises only 1.6

percent of the NDDOT workforce while they comprise 5 percent of North Dakota's population. (http://www.ndworkforceintelligence.com/)

Turnover percentages within the NDDOT are relatively low in comparison to the four agencies interviewed for comparative research. In 2008, 87 employees left the organization yielding an eight percent turnover rate. Of these, 29 retired, indicating a non-retirement or preventable turnover rate of 5.7 percent. The lowest percentage of employees leaving the organization was in the 41-50 age groups with a turnover rate of four percent. The highest percentage was in the 31-40 year age bracket with a turnover rate of 14 percent. This is concerning as these employees are considered mid-career and in the lower edge of Generation X. Of those who left the organization prior to retirement, the most common reason given was "Other employment including transferring to another state agency" (2008 NDDOT Survey of Organizational Health).

Benefits

Upon hire, all regular full-time employees receive standard North Dakota State benefits which includes family medical insurance, life insurance, 401K, 10 paid holidays, 12 days vacation annually, 12 days sick time annually, Employee Assistance Program (EAP), and flexible spending. In addition to these benefits, NDDOT also offers:

Approved overtime/comp time

Approved overtime/comp time is paid to regular and probationary employees who work in excess of 40 hours per week. Employees can take overtime in cash, paid at time-and-a-half per hour of overtime worked, or as comp time, awarded at 1-½ hours for every hour of overtime worked.

Flextime

Flextime is an alternate work schedule approved by an employee's supervisor, division director, or district engineer. Employees may work an alternative flex schedule if service to the public remains available during normal working hours Monday through Friday. Alternative schedules to the eight-hour standard workday are either four 10-hour days with schedule starting on Monday or Tuesday and ending no later than Friday, or four nine-hour days with one four-hour day.

Training and professional development

Training and professional development are offered to regular and probationary employees. Programs include in-house training, as well as specialized training provided by institutions, companies, and agencies. Generally, registration fees and expenses are paid by NDDOT.

Training Library

The training library offers employees an extensive collection of books, tapes, and videos on personal and professional development.

Tuition reimbursement

Tuition reimbursement up to \$10,000 per employee is available to regular and probationary employees who attend pre-approved undergraduate, graduate, or technical training courses. Recently, the NDDOT developed a partnership with the North Dakota State College of Science (NDSCS) to offer current NDDOT employees the opportunity to earn their Civil Engineering degree without leaving the department and with limited travel to the Wahpeton campus. NDDOT will also make some district offices available for training sites.

Scholarships

Scholarships are offered to students in engineering, engineering technology, and other related technology fields. Eligible students may receive up to \$2,000 per school year and up to \$6,000 total, with an expectation of summer and after graduation employment.

Sign-on or retention bonus

These bonuses are offered to certain eligible positions, including engineering, engineering related, and some information technology positions. The employee must commit to two years of employment, or reimburse the amount of bonus attributable to the incomplete period.(http://www.dot.nd.gov/divisions/hrd/joblistings.htm#nddotbenefits, retrieved March 7, 2009).

An interview conducted with a NDDOT employee who is primarily responsible for recruiting revealed four main areas for recruitment:

- Professional candidates with four-year degrees, focusing primarily on civil engineers;
- Technical candidates with 2-year engineering certificates, focusing on engineering technicians and surveying crews;
- Administrative support including secretaries, office assistants, and drivers license staff; and
- Skilled craftsworkers or experienced snowplow drivers and tenured diesel mechanics.

The upcoming recruitment focus centers on engineers and engineering technicians due to anticipated retirements. In addition, an area of recruitment and retention concern is with snowplow drivers and other positions in the western districts due to high salary competition and low population density.

This interviewed employee indicated that wages cannot be adjusted based on regions within the state, but bonuses may be offered for the difficult-to fill position. To enhance the salary structure limitation of snowplow operators in Williston and Dickinson, retention bonuses were offered this year. Based on the success of the practice, continuation of the program is planned for next year. Due to funding issues, bonus programs for professionals are not distributed as planned.

Over the next five years, 30 percent of the currently employed engineering technicians will be eligible for retirement. In order to attract new technicians, the NDDOT is currently offering two incentives. A grant programs with scholarships, if students come to work for the NDDOT, and a co-op internship program during the summer are being promoted.

The 2008 NDDOT Survey of Organizational Health completed by the Upper Great Plains Transportation Institute, North Dakota State University provides a thorough look into the strengths and weakness of NDDOT in relation to recruitment and retention. From the survey summary, employees indicated high levels of commitment to the NDDOT and positive attitudes about the nature of their jobs and their co-workers. The lowest ranked items were questions regarding compensation and performance management. The lowest ranking dimensions were "Human Resource Development" and "Performance Management." This ranked lower than a "3" on a 1-5 scale indicating an overall unfavorable impression in these two areas. (Source: 2008 NDDOT Survey of Organizational Health).

Human resource development in this survey included questions regarding recruiting and sourcing, hiring, developing, and promoting. The dimensions of performance management and pay for performance yielded unfavorable results.

The most negatively answered question within the entire survey was the statement, "There is an appropriate difference between the pay awarded to high performers and average employees." This negative score indicates that the pay differences between those perceived as high performers and average performers are not appropriate. Another low score related to performance management was the manner in which a low performer was reprimanded. This is quite indicative of a public employer where the process in dealing with a low-performing employee can be quite lengthy and arduous.

Length of employment impacted the scores on the survey. The longer-term employees gave lower scores to NDDOT. The highest scores came from recently hired employees. One conclusion that can be drawn from this is that a newly hired employee has a recent example of

another organization's work conditions, while a tenured employee is comparing work conditions to an ideal situation or experiences within the NDDOT. Another conclusion that could be drawn is that a newly hired employee has many opportunities available, but a tenured employee may become more specialized in his or her job duties and may find it difficult to move within the NDDOT. This result of younger workers scoring an organization more favorably than older workers contradicts the annual Salary.com employee Satisfaction Survey which states that "age affects job satisfaction - Millennials report the lowest job satisfaction."

Some of the open-ended questions dealt with compensation, and in specific hard to fill job titles, some salary adjustments may need to be considered. The Salary.com Satisfaction Survey states:

The levels of satisfaction among employees surveyed varied by job level and salary. Not surprisingly, the results of the survey suggest there is a direct link between pay and satisfaction - the higher the salary and job level, the greater the number of extremely satisfied employees (www.Salary.com).

Overall, the 2008 NDDOT Survey of Organizational Health is a good indication of the continued commitment of the employees to the organization. The NDDOT was selected as one of the 2008 Top Ten Places to work in Bismarck-Mandan by the Young Professional Network (YPN) in Bismarck-Mandan, and won the state award as the Top Place to Work in North Dakota for a young professional. As this lengthy nomination was completed by current NDDOT employees and submitted to the YPN nomination committee, this is a positive sign of organizational commitment.

Comparative Research

Demographics

There are a number of demographic factors that impact the recruitment and retention of employees for the NDDOT. At the time of this request, there are 1,052.5 allowed budgeted positions at the NDDOT, and there are currently 1,011 total regular employees located in nine locations. This indicates an approximate vacancy rate of four percent. During the busy construction season, additional temporary labor and interns are hired. These temporary workers are not considered in the regular budgeted full-time equivalency (FTE) numbers.

Salaries within the NDDOT tend to run above North Dakota state average salary wages. They are lower than transportation department salaries of Minnesota and Wyoming; salaries are higher than transportation department salaries in Montana and South Dakota. The average wages are significantly behind North Dakota energy and mining operations, which affects recruiting in western North Dakota. Additionally, the average wage is lower than the City of Bismarck, as

well as federal government positions within North Dakota, in agencies that offer similar benefits and flexibility, referenced below in Figure 4.1-1.

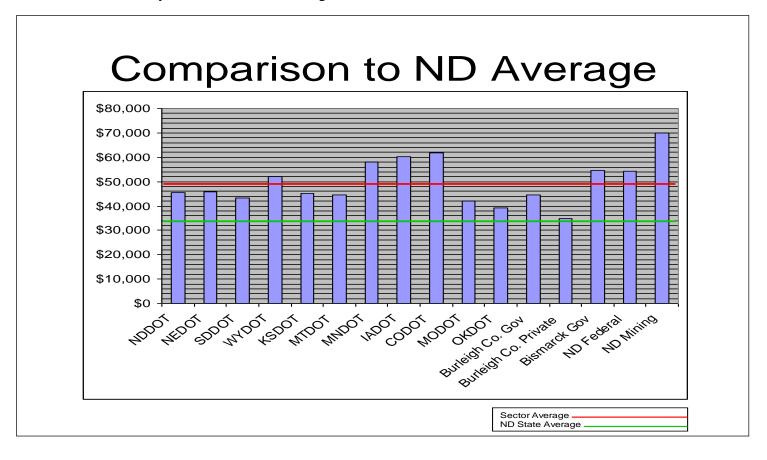


Figure 4.1-1 The average annual wages of NDDOT is compared to neighboring states departments of transportation and to other regional competitors. Sector average is shown with a red line, ND state average is shown with a green line. (http://www.payscale.com/research/US/State=North_Dakota/Salary).

Technical positions within the western half of North Dakota have been difficult to fill for two main reasons. First, the boom of the oil fields entices many skilled workers because the wages are significantly higher than those offered by other employers. Secondly, the regions from which Minot (Ward County and McClean County), Dickinson (Stark County and Slope County), and Williston (McKenzie County, Williams County, and Mountrail County) draw from are very sparsely populated as illustrated in Figure 4.1-2 below.

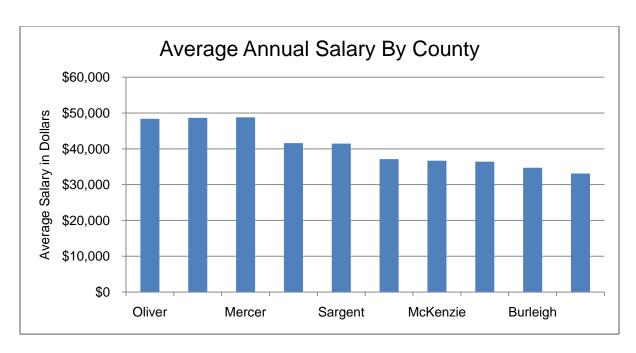


Figure 4.1-2. Shows the average annual wages of highly compensated counties in comparison to the state average annual wage. http://www.payscale.com/research/US/State=North_Dakota/Salary

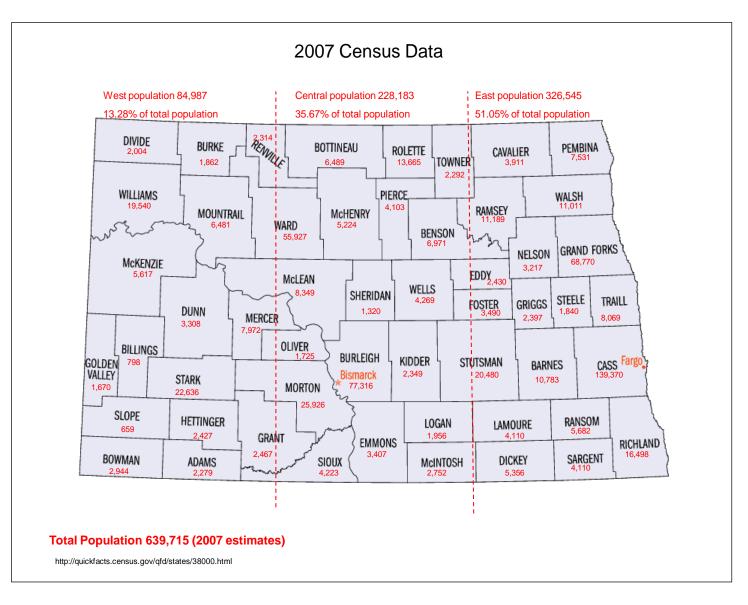


Figure 4.1-3. Shows the population distribution throughout North Dakota broken down by county and by the eastern, central, and western regions of the state. (http://quickfacts.census.gov/qfd/states/38000.html)

Interviews with the four local private employers with similar positions focused on present recruitment and retention practices, as well as anticipated future challenges in those areas. These local firms requested to remain anonymous, so the companies will be referred to as company A, B, C, or D.

Sourcing

The responses regarding recruiting depended on the type of position being recruited. One firm stated that for an administrative position, the use of North Dakota Job Service and the local papers met its need of obtaining applicants. To recruit higher level and specialty

employees, partnering with specific college websites, alumni associations, and job boards increased interest among new graduates and passive job seekers.

One employer responded that the company's greatest challenge was sourcing candidates for seasonal positions, specifically those in western North Dakota. However this employer predicted that the number of qualified applicants would be higher this year because of decreased oil production. The method of sourcing for seasonal employees used by two employers was the North Dakota Job Service and local job postings. One respondent advertises for seasonal jobs by advertising in local newspapers since workers are unlikely to relocate for a temporary position.

A local company that employs a large number of both entry-level and experienced engineers has established a variety of programs to attract talent to the organization. For example, this company has established a cooperative education program (co-op) for the summer months so upcoming graduates gain experience within the organization, and the company accomplishes summer project work within the peak season with the additional staff. This company also instituted a sign-on bonus for new engineers committing prior to college graduation.

Sourcing for mid-career engineers and other high-level positions such as management has these four firms extending recruiting efforts outside the North Dakota/ South Dakota/ Montana boundaries by partnering with universities in Minnesota and Wyoming and utilizing North Dakota extension marketing such as the "Experience ND" initiative led by the North Dakota Chamber of Commerce. This initiative conducts job fairs in Denver and Chicago. One employer mentioned that an increase in specialized technical recruiting staff has improved the organization's recruiting effort.

Another aspect of sourcing candidates is that communication with the candidate has changed. This is illustrated in the manner in which one employer fills positions. The previous practice of posting a position with a target fill date, collecting applications to that date, evaluating applications, and selecting candidates to interview is no longer acceptable for highly desired candidates.

This employer utilizes applicant management software that enables constant communication with applicants and sends alerts to candidates when a job opening matches the applicant's criteria. This employer feels that tracking potential employees has improved with this system.

Retention

Retention practices varied among the four companies interviewed. Company A reported that currently turnover for all full-time permanent positions is very low, with a majority of the employees in the Baby Boomer age bracket. Retention of the younger workers remains an area of concern. The overwhelming response from the external companies interviewed is that the

employees classified as Generation X and Generation Y are seeking more work/life balance and rewards that are more tangible.

Other retention issues were more company specific. Company C has a large percentage of its workforce eligible for retirement in the next few years. This organization recently instituted a career ladder plan for qualified employees. A career ladder identifies employees that seek advancement and offers rotational programs within that job scope or job family. This allows the motivated employee to develop additional skills and abilities that would broaden the experience base, preparing the individual for increased responsibility. Rotation also helps the organization glean information from employees who may enter retirement and are subject matter experts in a specific field. The transfer of knowledge to younger workers allows for greater consistency and improved knowledge of the workforce.

Company C offers a management development program that rotates an individual with managerial aptitude throughout the organization to gain management experience and company knowledge. This program lasts approximately nine months and has proven to be successful for supervisor placement.

Company B has a retention plan that centers on offering employees close to retirement age a phase-back program. An employee eligible for retirement may work on a part-time or asneeded basis. This program addresses the concern of the aging Baby-Boomer population and helps bridge the gap of available in-coming talent. In addition, this organization found that younger employees are demanding more flexibility with schedules. As a result, flexible start and end times are allowed.

Retention among these four organizations demonstrated similar trends of less-tenured workers willing to leave the organization for a higher salary, while employees with five or more years had a higher retention rate. A general trend is that employees in the Generation X and Y brackets are asking for more flexibility and a work/life balance, while the older workers are most interested in stability, pay, and benefits.

Challenges

The challenges for recruitment and retention for the NDDOT can be summarized in four categories:

- 1. Competition for scarce talent,
- 2. An aging workforce,
- 3. Motivating and retaining four generations of workers, and
- 4. Legislative salary and policy restrictions that are the nature of being a government agency.

The following charts provide a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the current practices of the NDDOT regarding retention and recruitment and an illustration of the generational differences and the challenges these differences bring to the workforce.

Current Retention and Recruitment Plan SWOT

Strengths	Weaknesses		
Job stability	Salary adjustments are highly based on		
Benefits	legislature approval		
Meaningful and tangible work	Limited upward mobility opportunities		
"Best Employer Award"	Limited opportunities to provide		
Above average salary range	performance incentives and bonuses		
	Lack of networking		
Opportunities	Threats		
Increased funding through stimulus plan	Competition for workers in sparsely		
Higher unemployment rate will free up	populated regions		
available talent	Average aging workforce 47 and rising		
National economic crisis	Young workers seek more work life balance		
	North Dakota demographics		

	Age Groups	Wants/ Needs	Work Environment	Core Values	Rewards and recognition
WARBABY	1920-1945: (64-89)	Value Longevity and Job Security	Difficult to get them to retire because of work ethic and fear of financial instability.	Respect, loyalty, family, hard work, dedication, sacrifice, delayed rewards, duty, honor, patriotism, law & order, rules & authority	Plaques, PR, Company stock, retirement=Part- time or temp jobs
BOOMERS	1946-1959: (50-63)	WORK = Fulfillment and Worth	Plan to work past age 65; workaholics.	Optimism, team player, self-gratification, personal growth, health/wellness, youth, recognition, respect, spirituality	Self indulgent items and activities. i.e.: vacations, conferences, box seats, spa treatments
GEN X	1960-1979: (30-49)	Lack of Organizational Commitment; Companies must meet their needs for loyalty; Balance work and time off, may not choose to advance because of this.	Works to Live; Willing to work hard but wants time off.	Diversity, global thinking, self-reliance, techno-literacy, informality, work/life balance and fun.	Meaningful and engaging jobs, take time to listen to their thoughts, short term tasks are motivating to this generation, Training/skill development are the best rewards.
GEN Y	1980-1999: (10-29)	Meaningful Jobs; Want to work for the Cool/Fun Companies with latest technology; Want individualized benefit packages, work schedules & job assignments; do not want entry level job tasks; want challenges immediately.	Pair with Older Mentor; learns from success & failures; teamwork is equal; ask a lot of questions wanting immediate response; wants fun competitions; engage in new problems/tasks/ skills.	Goal-oriented, tech-savvy, optimistic, diversity, civic duty, social activism, achievement, sociability, morality, confident and hopeful	Relaxed standards, reward them for results: gift certificates; afternoons off for team building, innovative refreshments Hoffman Walker, R. (2009. February 21)

Recommendations

The recommendations and goals for 4.1 are dependent upon the financial and employee resources available to the NDDOT. Current legislation impacting employee benefits for state workers, specifically House Bills 1029 and 1030, will allow for more flexibility to reward high performers. At the time of this writing, HB 1030 states that state agencies may provide monetary performance bonuses up to \$1000 per fiscal year. HB 1029 gives guidelines on employee recognition programs as well as allows for membership dues for professional organizations.

Recommendations: Workforce Assessment

- 1. Review pay rates of engineers and engineering technicians. Study the compensation of engineers and engineering technician positions. These positions are, and will continue to be, difficult to fill. A raise in pay grade, rather than utilizing the limited bonus structure, may be the most effective means of recruiting these professionals. Since regionalizing salaries does not seem like a viable option, some turnover during the boom times in the oil region will continue, while the turnover will stabilize during the bust times.
- 2. Establish "quality of hire" metrics. The recommendation is to establish a "quality of hire" questionnaire to assess recruitment effectiveness. "Hiring quality individuals" was ranked less than satisfactory in the recent survey. (Source: 2008 NDDOT Survey of Organizational Health). This questionnaire should be completed by supervisors after 6-9 months of a new hire's employment, and would evaluate if the new individual was meeting the needs of the organization. These results would assist with future recruiting plans (www.shrm.org).
- 3. Establish specific metrics related to turnover rates. The first step is to establish a turnover rate goal, keeping in mind that not all turnover is negative. A concern is in the age group of 31-40, where the next career change will most likely be the last for this group of people. This economy is currently experiencing a recession with higher unemployment numbers, and is a great opportunity to gain newly available talent.

Recommendations: Other

1. Maintain the current bonus system with bonuses tied to performance rather than tenure or retention. If the bonus program outlined in House Bill 1030 is approved, these bonuses need to be thoughtfully distributed to the highest performers along with a meaningful message. Keeping in mind that a \$1,000 annual bonus is not likely to deter an employee who has already decided to leave the organization, however morale and organizational commitment may improve.

- 2. Promote the branding of NDDOT as a great employer. There are over 1,000 employees within the NDDOT, and each of them is a potential public relations representative. The use of a referral bonus for an existing employee who refers a new hire is one example of utilizing current staff members as recruiters. This referral bonus could be part of the recruiting budget or the employee's budget, depending on the logistics of the plan.
- 3. Emphasize the total compensation package. Communicate the total compensation package when stating annual salary during annual increases. This information for state employees is currently found on pay stubs and includes the total cost of health insurance, employee assistance plan, life insurance, and state pension plan. For an average full-time employee, this would equal close to \$1,000/month and can be a substantial addition to the annual compensation package.
- 4. Continue the development of NDSCS partnerships. Expand the partnerships for the engineer technician program at the NDSCS and to explore other "school to work" partnerships.

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Objective 4.2: "Develop ongoing professional growth and development programs for employees emphasizing quality products and services" (2008-2013 North Dakota Department of Transportation Strategic Plan).

A career development program should attract, develop, and retain talented employees by providing a well-constructed and mentored development experience. Employee development, technical training, and safety programs are developed and implemented to clarify, simplify, and enhance NDDOT career development opportunities for all employees.

Approach

The team identified criteria to perform both internal and external assessments. These criteria include:

- Base of the instructor, whether internal or external;
- Evaluation results;
- Course development, internal vs. external;
- Attendance levels:
- Costs; and
- SWOT (Strength, Weaknesses, Opportunities, Threats) analysis

Face-to-face interviews and email correspondence allowed the team to obtain information from the NDDOT staff. Material received from the NDDOT was reviewed and analyzed.

NDDOT has approximately 170 training courses available to its employees. The team randomly selected 14 courses from this list and applied evaluation criteria to them. Although selection was random, it provided trends in data collection and procedures. Of the fourteen courses selected, only one, the CPR course, was unable to be reviewed due to a lack of data.

The Mentoring Program, along with several professional growth and development programs, were included in the review and analysis. The following technical and safety training courses reviewed included: Fleet Focus Update, Safety Communications Training, Employee Assistance Program, PE Exam Review, Business Writing Course, 21 Indispensable Qualities of a Leader, KARRASS Negotiating Skills, and GeoPack Roadway Design. Of the courses reviewed, only the KARRASS Negotiating Skills Course charged a fee, which was \$627 per student.

Workforce Assessment

The NDDOT has a number of development programs that include succession planning, mentoring, leadership skills, safety trainings and technical training courses that address specific job requirements.

NDDOT Mentoring Program

NDDOT's Mentoring Program pairs an experienced NDDOT employee with a younger employee for twelve months in a mentoring relationship. The mentee is to develop objectives for the mentorship, and these objectives drive the activities.

Demand for the mentoring program has increased each year, making it a successful opportunity in NDDOT's employee growth and development program. The challenge is finding an adequate number of mentors to match with the number of requests.

The number of Central Office employees involved in the program is greater than expected when compared to the involvement of district offices. As identified below, research identifies a 39.7 percent central office participation rate whereas the highest district participation rate is Dickinson with a 19.8 percent and Bismarck, Valley City, and Grand Forks at a 1.6 percent participation rate respectively. Additionally, there were 13 mentees whose location was not identified and three repeat mentees. One mentee participated in three separate years.

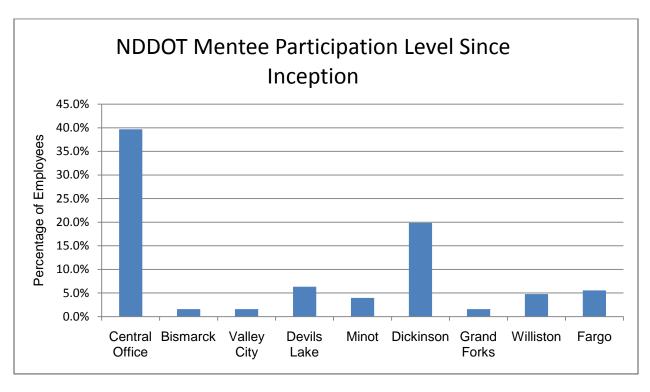


Figure 4.2-1. The percentage of mentees from the Central Office is disproportionate to that of the district offices.

Fleet Focus Update

This course is led by an outside facilitator and is held for employees who maintain the company's fleet vehicles. Changes made to department procedures or required training triggers the scheduling of the next course. No documentation of the topics covered or evaluations were available for the Fleet Focus Program. Working with other Fleet Focus users in the region to combine training may benefit NDDOT by decreasing expenses when bringing a trainer onsite.

PE Exam Review

Led by an outside instructor, most course participants felt the course was relevant to their job. While the course was open to 50 employees, ten participated. There were no data provided detailing the number of Engineers in Training (EIT) engineers qualified to take the exam.

In order for an engineer to qualify to take this exam, the engineer must pass the Fundamentals of Engineering (FE) exam, and becomes an EIT. Upon passing the FE exam, an engineer needs to be supervised by a registered Professional Engineer (PE) for four years before becoming eligible to take the PE exam. NDDOT intends to have all engineers certified. In order to achieve this goal, NDDOT provides personal counseling by supervisors, managers, and departmental leaders, along with the incentive of a one percent salary increase on certification. Certification is required for consideration or assignment to certain positions.

The PE review course is a video conference led by an instructor from the University of Utah Traffic Lab. With a course length of three consecutive days, lasting seven hours each day, the participant prepares for the PE exam, specializing in Transportation (NDDOT Memo, Priscilla Deschene – July 1, 2008).

Most responses on the evaluation form were "good." There were a few comments suggesting improvements. One of the comments was "Need more time – everything was rushed the last day;" another was "need better visualization – tough to see." There is no documentation that these recommendations were reviewed and/or implemented for course improvement.

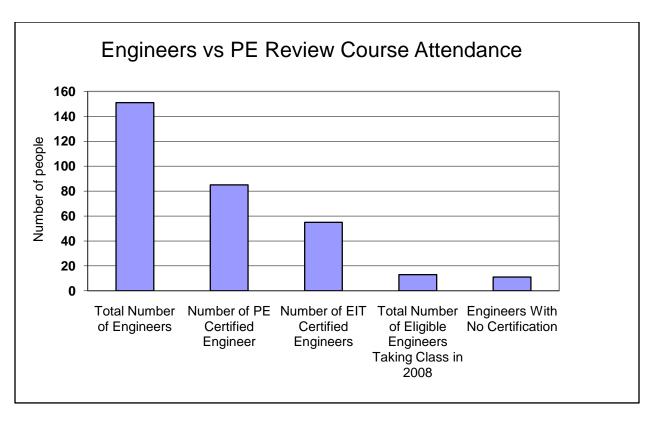


Figure 4.2-2 Of the 151 engineers working for the NDDOT, 85 are PE certified, and 55 are EIT certified.

Business Writing Course

The Business Writing Course is offered annually. Evaluations indicate that 100 percent of attendees were either very satisfied or satisfied with the course. Ninety-one percent of the evaluations provided suggestions on improving the course.

The course was open to 50 attendees, with 22 attending. A number of strengths in the course were identified which include the depth of information provided and instructor's ability to respond to questions. The course had an excellent evaluation tool that could be used for other course evaluations to provide a consistent approach to course evaluations.

21 Indispensable Qualities of a Leader

NDDOT promotional materials state,

This 'Basic Level' leadership training involves a commitment to ATTEND ALL 23 facilitated classroom work sessions (Attendance is Mandatory). The first and last sessions will be conducted at the NDDOT's Central Office. Up to eight individuals from the Central Office and

Bismarck District, and one or two from other Districts will be selected for this training via VNDOT. Additionally, this course is offered once per year.

This course is designed to bring out the leader in you. What do you dream of? In your wildest imagination, what do you see yourself doing? Now, what is standing between you and that dream? (NDDOT Memo, Priscilla Deschene July 8, 2008).

The course is designed for 16 attendees. Eight employees participated. NDDOT had very little evaluation data for this course. Evaluations were not available. This course requires an extensive commitment because of the mandatory attendance and length of course. There was no mechanism established to make up a missed class.

Safety Communications Training

This is an instructor-led course, held annually, and is available to all employees. Safety Communications Training is held at each District location to help reduce travel and increase attendance. Course evaluations were not available. Attendance sheets for the spring safety meeting titled "Pandemic-Flu-Risk Man.-Exec off" were provided and showed 879 employees attending which is an 86 percent attendance rate.

KARRASS Negotiating Skills

KARRASS Negotiating Skills provides effective skills to actively use in negotiating relationships with external customers, co-workers, subordinates, and supervisors. Course records identify attending employees had a grade 10 or higher ranking. Fifty-three employees attended in 2007. Course evaluations were not available.

GeoPak Roadway Design

GeoPak Roadway Design is an instructor-led, computer-based course that lasts five days. This course includes road, site, survey, drainage, sewer, and landscaping training modules. There was no internal information provided by the NDDOT on this course.

Employee Assistance Programs

A variety of Employee Assistance Programs are held each year. These are instructor-led, and offered twice each year. St. Alexius Medical Center determines the topics offered and the course schedule, inviting NDDOT employees to attend.

In 2007, courses offered included *Management vs. Leadership*, *So, Now You're a Supervisor*, *Parenting the Emerging Teenager*, and Whose Problem is it Anyway? Attendance for the *Parenting the Emerging Teenager* course was the highest with 43 employees attending. Fourteen NDDOT employees attended *Management vs. Leadership*; 13 attended *Whose Problem is it Anyway?* and 23 employees attended *So Now You're a Supervisor*.



Figure 4.2-3. The most popular employee assistance training was *Parenting the Emerging Teenager*.

A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis was completed on the Current NDDOT employee growth, development, technical, and safety training programs.

Strengths-Internal

- Broad variety of topic training courses available to job specific employee groups
- Supervisory and non-supervisory education opportunities available.
- Variety of delivery methods
- Differing levels of responsibility
- Assistance with training from internal and external sources
- Detailed information provided
- Excellent evaluation tool written for Business Writing Course

Weaknesses-Internal

- Limited evaluation of programs.
- No employee participation records maintained
- No record of suggestions for course improvement being implemented.
- Lack of a standardized evaluation form
- Lack of evaluations being completed

Opportunities

- Coordinating with local colleges and other businesses for training instructors. May collaborate with other organizations using the same programs such as GeoPak to decrease instructor expenses.
- Formalize an evaluation program.
- Assess employee education needs, including in the areas of employee assistance.
- Implement a Career Tracking Program
 Consider working on current NDDOT projects as part of training, such as in GeoPak course.

Threats

- Increase leadership skills training to keep supervisors current.
- Safety and technical training programs should be reviewed closely to determine if they should be mandatory or optional, and that all identified employees are participating.
- Lack of course evaluations does not allow for course improvement.

Comparative Research

Career development is a powerful employee motivator and retention tool, not to mention, a competitive strength when it comes to attracting new talent, all of which can have a profound impact on NDDOT's bottom line.

Satisfied workers are more productive and likely to be retained when they believe their employer values them. Discerning candidates are attracted to organizations with a reputation for encouraging employees' professional growth and development. A number of organizations were reviewed and the following opportunities may be valuable for NDDOT to consider.

Internal Job Fairs

Internal job fairs educate employees about other divisions within the organization, and allow them to explore future career opportunities. This often strengthens long-term employee commitment to the organization. Improved understanding of the skill sets required in another division also provides an opportunity to increase understanding and improve productivity among divisions.

Career Tracks

The common wisdom in most organizations is to give top performers increased responsibility and more people to supervise. Some people do not enjoy, nor will they ever excel, when managing others. Designating managerial roles as the only advancement opportunity may discourage top performers or set them up for failure.

Some organizations create two career track options for their star performers. A managerial career track, as well as a technical career track, is held in equal esteem in the eyes of upper management. When implemented, the career track is established between the manager and employee. Employee development is included in performance evaluations and compensation decisions. While most CEOs and managers will state that their greatest asset is their people, career tracking demonstrates this belief by investing in their personal growth. Employees are rewarded for hard work and contribute to the long term success of the organization, while valuing the entity they work for. (http://net-temps.com).

Women's Advisory Board

Seventy-six percent of NDDOT employees are men. Women comprised 46 percent of the U.S. labor force in 2007, and are projected to account for 47 percent of the labor force in 2016. In 2007, a record 68 million women were employed in the U.S., 75 percent of which worked full-time. The greatest percentage of employed women, 39

percent, worked in management, professional, and related occupations; 34 percent worked in sales and office occupations, and six percent in production, transportation, and material moving occupations. (http://www.dol.gov/wb/stats/main.htm, April 4, 2009). At NDDOT, women comprise 24 percent of the workplace.

Another company has started a Women's Advisory Board which encourages employees to consider non-traditional roles, empowers women through company policy and organizational structure, and promotes the inclusion of women in the workplace. Since a great percentage of women in North Dakota are active in the workforce, this allows for insight in tapping into this resource.

Award Programs to encourage creative thinking or community contributions

Some companies have an internal award program that encourages creative thinking by rewarding individuals for unique ideas that improve the department's bottom line. Additionally, NDDOT employees become ambassadors of the organization when they participate in community organizations and activities. Honoring community involvement recognizes the importance of NDDOT staff as ambassadors for the organization.

Recommendations: Workforce Assessment

- 1. Implement a consistent training evaluation measure. The Business Writing course has an excellent tool developed. A few adjustments to this evaluation form would make it useable for all training opportunities in NDDOT. This will allow NDDOT to track the value of course offerings and improve the program.
- 2. Institute a formal career-tracking program. Implement a software package to track participation in employee training, certifications, and development programs. NDDOT is currently working to implement the PeopleSoft Enterprise Learning Management (ELM) system. This system will perform the task of tracking all the courses available to NDDOT employees. ELM will track employee demographic information to include attendance, learning outcomes, employee evaluations, job locations, and career advancements. This will be an invaluable tool in assessing projected gaps in the workforce.

Recommendations:Other

- 1. Consider the value of increasing online training via webcast or video streaming. Taping training sessions will allow the employees to return later for review.
- 2. Utilize training opportunities to work on current NDDOT projects. This allows employees to directly apply learning, gaining skills, and decrease the expense involved with having an employee not completing regular duties.
- 3. Identify local training providers such as businesses, colleges, and universities to instruct classes. Continue to coordinate training opportunities with other businesses that may benefit from the same training to decrease expenses.
- 4. Review training offerings at least every two years to ensure they remain viable, valuable, and beneficial.

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Objective 4.3 "Review and enhance health and wellness programs." (2008-2013 North Dakota Department of Transportation Strategic Plan)

Approach

The basis for the analysis of the NDDOT Health and Wellness Program was criteria established on www.wellnessproposals.com. This site purports the following steps in developing and evaluating a health and wellness program. These criteria were applied to both the workforce assessment and comparative research analyses.

- 1. **Applied Assessment:** Effective assessment is the gathering of data to build a useful profile of employee benefits.
- 2. **Applied Strategy:** Creating a strategic plan that includes forming a committee, isolating evaluation criteria, identifying goals and objectives, and confidentiality.
- 3. **Implementation:** Occurs when the components of the plan are physically applied. Elements may include health screenings, referral of high-risk employees to a physician, or use of work-site wellness programs. The investigation of other initiatives to promote wellness are included.
- 4. **Evaluation:** Program results are measured and tracked. Participation, cost savings for employer and employee, effectiveness, and progress of the program are measured. This provides the opportunity for program improvement and adjustments (www.wellnessproposals.com).

Information for the workforce assessment consisted of interviews conducted with staff from the NDDOT on February 17, February 20, March 6, and March 17, 2009. Materials reviewed were the January 2006 NDDOT Employee Wellness Program Action Plan, the July 2006 NDDOT Employee Wellness Program, the NDDOT Employee Wellness Policy, the Employee Assistance Program (EAP), the Document for Health Premium Discount, the May 2008 NDDOT report by American Red Cross and Safety Officer Information.

Workforce Assessment

In January 2006, the NDDOT created an Employee Wellness Program Action Plan. The program obtained funding from a one percent discount on health insurance premiums if the department wrote a comprehensive program. The NDDOT Wellness Program budget is approximately \$120,000 annually.

In the January 2006 Action Plan, the NDDOT established seven measurable outcome/impact objectives for the NDDOT Central Office Wellness Program.

- 1. Fifty percent of DOT employees returning surveys from the 2006 employee survey results will report they are aware that the Wellness Program is available at DOT.
- 2. Fifty percent of employees returning the 2006 surveys will report that having the Wellness Program available contributes to a more positive work climate.
- 3. Fifty percent of employees returning the 2006 survey will report that they have participated in at least one wellness activity.
- 4. By the end of 2006, at least 90 percent of employees who have participated in "Awareness" activities will report that the activities increase their knowledge about healthy lifestyle behaviors.
- 5. By the end of 2006, at least 50 percent of employees who have participated in "Awareness" activities will report that the activities increase their motivation to adopt healthy lifestyle behaviors.
- 6. Fifty percent of employees who regularly participated in "Lifestyle Change" activities will report that they maintained the activity for at least 3 months. Forty percent of employees who regularly participated in "Lifestyle Change" activities will report that they maintained the activity for at least 6 months.
- 7. By the end of 2006, at least 70 percent of DOT employees will report that the Wellness Program is sensitive to the needs and interests of employees. (North Dakota Department of Transportation. 2006. January. *Employee Wellness Program Action Plan.*)

In the January 2006 Action Plan, the NDDOT established a Mission and Vision Statement for the program.

The mission of the Department of Transportation's Wellness Program is to decrease the health risks of employees while empowering them to be conscientious health care consumers.

Wellness teams create programming that will help individuals reach their maximum wellness potential. The program encourages employees to take responsibility for enhancing their own well-being, decreasing their risks for acute and chronic illness and premature death, knowing when to seek appropriate care for medical problems, and acquiring knowledge tools for achieving high-level wellness.

The vision of the Department of Transportation's Wellness Program is that all employees will choose healthy lifestyle behaviors and work in a safe, productive environment.

NDDOT encourages healthy lifestyles and provides equal opportunities for all employees to develop healthy patterns in their daily lives. These healthy lifestyle behaviors will reduce injuries both on and off the job, decrease costs, decrease absenteeism, reduce presenteeism, and increase employee productivity and job satisfaction, and allow employees to fully achieve their potential and enjoy life to the fullest (NDDOT. 2006, January. *Employee Wellness Program Action Plan*).

In 2006, the NDDOT formed a Central Office Wellness Committee. The Committee oversees wellness-planning teams at the Central Office, with each district identifying needs and opportunities unique to its District. The organizational chart for this committee is illustrated in Figure 4.3-1. This cross functional group includes management, midlevel, and low-level employees. The goal of wellness planning teams is to increase employee awareness of a healthy lifestyle through the objectives identified in the Employee Wellness Program Action Plan. Strategies set by the committee include:

- **Screening:** including, but not limited to, administering a periodic employee needs assessment, program evaluation and participant status.
- **Physical Activity**: including, but not limited to, ongoing fitness classes, weight control meetings, and extended educational programs.
- **Life Style Education**: including, but not limited to, newsletters, health fairs, onetime seminars, and brown bag lunches.

(NDDOT. 2006, July. Employee Wellness Program).

(NDDOT. 2006, January. *Employee Wellness Program Action Plan*).

(NDDOT Employee, personal communication, March 6, 2009).

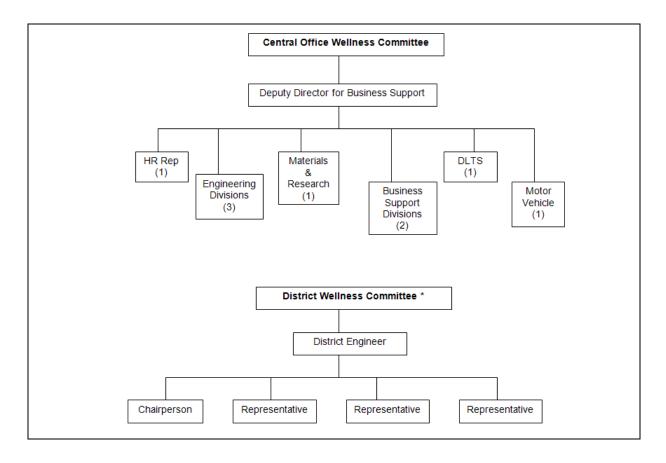


Figure 4.3-1 Wellness Committee Structure

Interviews conducted with a NDDOT employee revealed that the NDDOT is striving for long-term success, rather than short-term gains. The NDDOT has consciously focused on the younger generation (NDDOT Employee, personal communication, March 6, 2009).

While this approach may benefit recruitment and retention of the younger employees, it may take longer to demonstrate the effects.

To date, the NDDOT health and wellness program has primarily focused on education and awareness. Education and awareness based health and wellness program generally demonstrate results in the long-term versus the immediate return on investment (ROI) focused program-utilizing data to measure the financial benefits.

Internal Implementation

The NDDOT has contracted with the American Red Cross to conduct annual Health and Wellness Fairs and Screenings at each district office. The screenings measured blood pressure, total cholesterol, blood glucose, grip strength, body mass index, and sleep disorders. Additional counseling and information for tobacco cessation, diabetes, skin cancer prevention, oral health,

and emergency preparedness were also available (NDDOT. 2008, May. *Health & Wellness Fair*, 2007-2008 Report).

Over the past two years, attendance at the Health and Wellness Fairs has been lower than desired with 454 of the 1,018 employees participating in the screenings (see Figure 4.3-2). The percentage of employees attending by region was Central Office 35 percent, Eastern Region 39 percent, and Western Region 26 percent. One possible reason given by NDDOT staff for the low attendance could be employee workload. Over the last 35 years, the NDDOT has experienced an increase in workload, without adding full time employee equivalents (FTE's) (NDDOT Employee, personal communication, March 6, 2009). This may contribute to lower attendance rates.

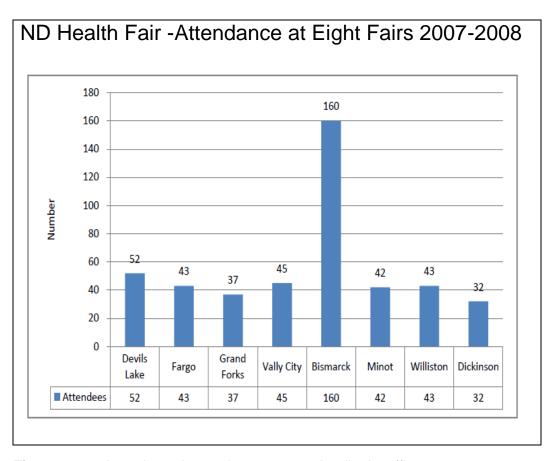


Figure 4.3-2: Attendance is consistent among the district offices. (NDDOT. 2008, May. *Health & Wellness Fair*, 2007-2008 Report)

Data from the screenings are available to the NDDOT from past health fairs conducted by the American Red Cross but not evaluated. Evaluation of data would be beneficial in determining the effectiveness of the health fairs. On a positive note, one health fair identified an employee with a health condition of pre-diabetic (NDDOT Employee, personal communication, February 20, 2009). Early detection of health risks benefits both the employee and the NDDOT.

Implementation of Health Risk Assessments, offered through the American Red Cross never materialized due to fear of confidentiality of employee information (NDDOT Employee, personal communication, March 6, 2009).

The North Dakota Public Employee Retirement Services (NDPERS) offers an online Health Risk Assessment. All employees have access to a computer with a unique login and confidentiality is not an issue with the NDPERS assessment.

The NDDOT conducted employee surveys in 2002, 2004, 2006, and 2008. While section four of the employee survey addressed questions directly relating to physical health and well-being, survey questions and the objectives detailed in the Employee Wellness Program Action Plan had no direct connections.

The NDPERS contract offers employees access to health coaches through a link to the NDDOT wellness web page. Currently, no data is available on the utilization of this program that is specific to the NDDOT. The NDDOT is discussing a new health care insurance contract with Blue Cross Blue Shield (BCBS) and is looking to add more wellness/preventive maintenance programs. Some of the proposed changes are:

- Offer a \$20 reimbursement for belonging to an approved health/fitness center and attending at least 12 times monthly.
- Access to a BCBS wellness resource called My Health Center, which offers a website, Health Risk Assessment, incentive point's system rewards, and health resources.
- Provide additional immunizations, health screenings such as colonoscopies, and coverins visits with a licensed registered dietitian. (NDDOT Employee, personal communication, March 17, 2009).

The NDDOT is apprehensive about implementing an incentive plan due to concerns about the legality of offering incentives through a government entity. (NDDOT Employee, personal communication, February 17, 2009). According to research, incentives are critical to a successful Health and Wellness Program (Bobcat ESH O.T. and R.N., personal communication, February 16, 2009).

The NDDOT has encouraged employees to participate in a variety of health and wellness opportunities. Communication activities include placing BCBS posters on employee bulletin boards, flu shots for employees, and renaming "coffee breaks" as "wellness breaks." On-site exercise classes were offered, but failed due to lack of interest. Steps been taken to change the culture of the NDDOT by offering competitions. For example, NDDOT offered the "Biggest

Loser" competitions in several Districts. The use of walking paths and stairways is encouraged and the cafeteria offers healthy food choices for lunches and meetings.

The MyDOT website is the Intranet for all NDDOT employees. A wellness section where the Wellness Coordinator attempts to post a program highlight monthly is included on the site. Another form of communication is the Daily E-Newsletters for all NDDOT employees. The NDDOT is also investigating the option of offering a weekly health tip.

Reaching all employees with the same message at the same time is a challenge due to the distance separating the district offices. Fifty percent of the NDDOT employees work in the field making communication more complicated. Current communication avenues used are the MyDOT website, in-house memos, and bulletin boards.

The NDDOT offers employees online training with Workforce Safety and Insurance (WSI) and BCBS on a number of topics:

- Heart and cancer health,
- Smoking and drinking education,
- Buckle up training,
- Religious education,
- Mental and emotional education,
- Financial training,
- Better brown bag lunches, and
- Lifting and pulling correctly.

Internal Evaluation

The NDDOT has not conducted a financial ROI on the wellness program so no key metrics and baseline measurements are established. There has been no follow-up to quantify the improvements in a healthy lifestyle to insurance costs, absenteeism, presenteeism, or employee morale.

Currently, the NDDOT Safety and Wellness Programs are functionally separate. Ergonomic and safety issues are coordinated through the Safety Officer, reactively, rather than proactively. Evaluations are subcontracted through an external company. The Wellness Program does not have access to measurements and trends with healthcare premiums, WSI premiums, frequency, or severity rates. The NDDOT Safety Department maintains all data within the department and is not readily accessible.

Research shows that successful wellness programs decrease medical and absenteeism expenses by as much as 30 percent in less than four years. (American Journal of Health

Promotion. July/August 2005) Figures 4.3-3, 4.3-4, and 4.3-5 below illustrate the increasing trend in NDDOT WSI premiums, frequency, and severity rates.

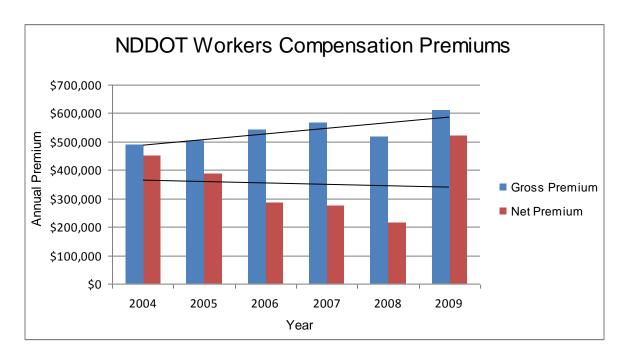


Figure 4.3-3 Shows the growing trend in gross dollars owed for WSI premiums. The net premium reflects the total premium after rebates have been applied (NDDOT, March 2009).

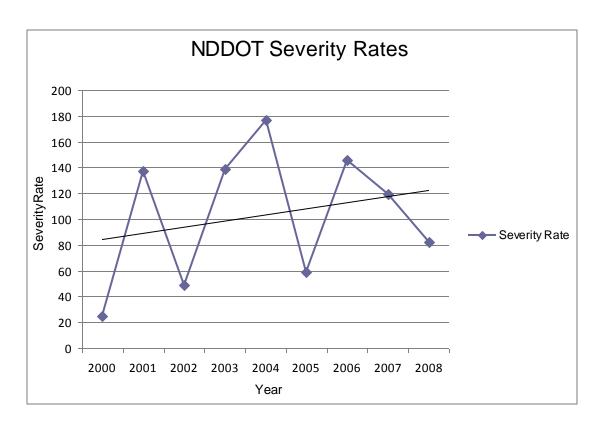


Figure 4.3-4. Severity = Time Loss Days Per \$Million of Payroll. Since 2000, upward trending indicates the number of work related lost time injuries relative to total payroll have increased.

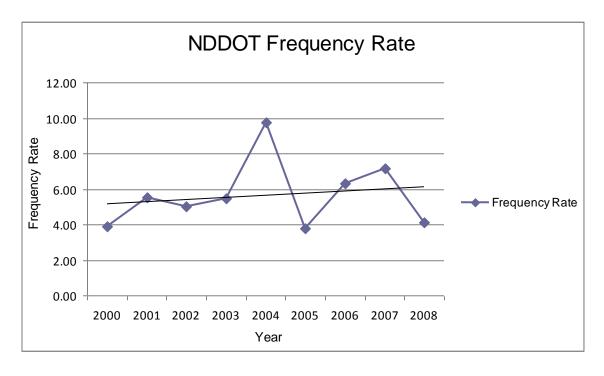


Figure 4.3-5. Frequency Rate = Number of Claims Per \$Million of Payroll. The work related injuries were lower in 2008; however trending indicates an upward movement.

The NDDOT is evaluating how to measure progress and sustain the gains obtained by the Health and Wellness Programs. Areas for improvement are currently being identified. For example, the Dickinson "Biggest Loser" competition did not award a winner until six months after the program was completed, so this must be addressed.

The NDDOT has not compared its wellness programming to other states. There is no network established with other regional wellness programs, government or civil.

Information regarding insurance premium increases/decreases and WSI claim information was requested from the NDDOT but was not readily available.

A Strengths, Weaknesses, Opportunities, and Threats Analysis was completed for the current NDDOT Health & Wellness Program.

Strengths-Internal

- Importance placed on wellness by the department
- Wellness strategic plan was created
- Established governance for wellness program
- Good awareness activities
- Actively sharing information w/workers
- Paid opportunities to participate in wellness classes
- MyDOT website is a good communication channel
- Have allocated funding approx. \$100K -\$120K

Weaknesses-Internal

- Approximately \$98/person budgeted
- Leadership team has other primary duties
- Difficult to provide equal programming to rural facilities
- Poor communication channel to remote/outdoor employees
- Lack of identifiable metrics
- Lack of incentives & flexibility to offer incentives
- No major movement past awareness phase
- Functional silos Safety vs. Wellness Programs
- Arrogate reporting not being done

Opportunities-External

- Physically fit individuals (especially those w/strong cores) are less susceptible to injuries
- PT/OT/Certified Personal Trainers to provide oversight for ergonomics (may be outsourced)
- Set objectives and measure to improve
- Targeted programs for rural employees (High School Gym)
- More effective incentives collaborate best practices
- Recruitment and retention of staff

Threats-External

- Long-term sustainability with a rewards based program
- Work schedules, especially traveling employees
- Lack of convenience geography & climate
- Wellness program has solid foundations but fitness dimensions are underemphasized
- Example for injury reduction fitness is key
- Rising costs for health insurance
- Competition for the same employees

Comparative Research

Information collected from public and private businesses was reviewed. Materials from the South Dakota Bureau of Personnel (SD BOP), the Federal Highway Administration (FHWA), and the Maine Department of Transportation - Region 5 (Maine DOT) were assessed. An interview was conducted with a member of the Health and Wellness Program for the SD BOP. The health and wellness team reviewed four local and private businesses including Bobcat Company, Marathon Oil, Medcenter One Health Systems, and St. Alexius Medical Center.

External Applied Strategic Plan

Each of the businesses and agencies reviewed has a unique approach when addressing health and wellness. Health and wellness programs were initiated to decrease health care costs and increase employee satisfaction for each entity. Other desired benefits identified include increased employee retention, decreased injury rates, and a decrease in time spent hiring, training and retraining employees.

According to the Medcenter One Employee Health and Wellness Services, research demonstrates a need for at least \$150 in incentives per participant to reach those at highest risk. The 1999 National Worksite Health Promotion Survey notes that the top six reasons for offering a health promotion program include keeping workers safe and healthy, improving morale, reducing healthcare costs, retaining good employees, and improving productivity (MG Wilson, HSD, DM DeJoy, PhD, CM Jorgensen, DrPH, American Journal of Health Promotion, 1999 - Volume 13, Issue 6 July 1999). (www.medcenterone.com).

Each business or agency has different benefits for health and wellness options. Highlights of some of the programs include:

- All state employees and covered spouses may participate (SD BOP, 2008).
- Each office can determine needs and obtain health services (FHWA, 2005).
- Exercise equipment can be purchased for offices/sites (FHWA,.2005).
- Group rates for gym memberships (FHWA, 2005).
- Utilized University of Southern Maine for evaluation of progress toward an increased return on investment (Maine DOT, 2008).

The most basic approach taken by the FHWA, "supports and encourages physical fitness and other preventative health programs..." (FHWA, 2005). With this statement, the FHWA leaves it to each individual branch to set up its own health and wellness program.

While each company and agency is unique, there are similarities to the NDDOT. The Maine DOT Region 5 has an average age of 45, nearly identical to the NDDOT workforce average age of 47 years.

External Implementation

Certain elements are present in all of the reviewed programs. Each program provides its employees with a health/physical examination. Additionally, each program provides educational opportunities that promote healthy choices and teaches participants to lead a healthy lifestyle. Many of the programs utilize incentives to encourage employee participation. Incentives may be dependent on individual and group participation.

The NDDOT is responsible for developing its own Health and Wellness Program. Conversely, the State of South Dakota employees are eligible to participate in a health and the Bureau of Personnel oversees a Health and Wellness program called www.HealthyEmployees.sd.gov. The www.HealthyEmployees.sd.gov Program utilizes incentives to encourage participation.

Participants earn up to \$100 on a taxable or non-taxable basis.

- Taxable: Participants receive reimbursement for exercise equipment, fitness
 center fees, fitness class fees, Game & Fish and Park entrance licenses, and
 hunting license fees (SD BOP, 2008). The value of the reimbursements shows as
 income on the employee's paycheck stub.
- Non-taxable: Participants may elect to have \$100 placed into a Medical Spending Account and can be utilized when their account is depleted (SD BOP, 2008).
- Incentives for meeting additional goals can also be earned. Non-clothing items
 offered are jump ropes, gym towels, fleece blankets, and exercise journals.
 Previous incentives include t-shirts, sweatshirts, and warm-ups. The value of the
 reimbursements shows as income on the employee's paycheck stub.

Participants are required to use a free online tracking program. Benchmarking and trending from the data collected determine improvements for the health and wellness programs. The program automatically deposits \$100 to the appropriate account once the employee meets the stated goal(s).

Participants in Marathon Oil's Health and Wellness Programs receive a variety of incentives and benefits. Some incentives include:

- One physical exam or preventative health screening per year for those not covered by the health plan,
- Reimbursement for gym memberships and some lifestyle/wellness classes,
- Can earn points to be deposited into the Marathon Health Reimbursement Account,
- Money in the account can be used for current and future health-related expenses
 Marathon Oil will contribute \$250 per covered individual per year, up to \$750 for the
 Health Reimbursement Account, and

• Marathon Oil employees pay a premium on their health insurance of \$73 per month and pay higher rates to include family members at \$218 per month (Marathon Oil, www.marathon.com/content/documents/careers/benefitsataglance09_web.pdf).

The NDDOT provides health coverage to its employees and their families at no cost. This benefit has been very attractive to married individuals who have children (NDDOT Employee, personal communication, March 15, 2009).

External Evaluation

The Maine DOT measures five elements for return-on-investment. These may be useful in developing a tracking program for the NDDOT.

- Track total wellness program costs including travel and incentives.
- Track individuals anonymously comparing participants to non-participants in areas such as wellness interventions, health risks trends, and actual health behavior changes.
- Collect regional ROI data including workers' compensation costs, injury claims costs, health care utilization and sick leave.
- Measure health risks and employee satisfaction using standardized format.
- Assess crew positions to determine minimum fitness levels and implement policies, assuring minimum fitness goals met specified position requirements.

(http://www.maine.gov/mdot/transportation-research/pdf/report0803f.pdf)

To collect data for the evaluation phase, the Maine DOT recruited the University of Southern Maine to evaluate its Health and Wellness Program. The evaluation showed that 40-60 percent of the employees participated over a three-year period. While 91 percent of Maine DOT participants were overweight, 60 percent of those who participated in the 2008 NDDOT health fair screenings were overweight. However, 47 percent of NDDOT health fair participants had elevated blood pressure, compared to 18 percent of Maine DOT participants.

A Health and Wellness program can provide a number of benefits to the employer besides a reduction in insurance premiums. In tracking the Maine DOT return-on-investment, the researchers found:

- In 2006 workers comp claims dropped from 875 hours (2006) to 236 hours (2007). Cost of injuries incurred dropped each year \$100,236 (2005) to \$31,105 (2007).
- Average ROI across 4-year period was \$2.90 (for every \$1 spent on wellness \$2.90 recovered) (Maine DOT, 2008)

Other methods can be utilized for collecting data as well. Medcenter One Health Systems measures different areas including absenteeism due to chronic disease/complications, risk factor reduction, behavioral changes, and biometric measures.

The St. Alexius Medical Center wellness program has seven objectives. If an employee obtains five of the objectives, the employee is eligible for a \$300 incentive bonus. The pay-out is contingent upon the medical center reducing BCBS costs and sick leave usage for participants being twenty hours lower than non-participants. Accountability rests upon the employee to achieve personal objectives, but meet company objectives as well.

Recommendations: Workforce Assessment

- 1. Review and redefine established objectives and goals. A key to improving the employees' health and wellness is to establish SMART (specific, measurable, agreed upon and attainable, realistic, time bound and track-able) objectives. The recommendation is to have NDDOT, the Wellness Committee, the Health and Wellness Director and the Safety Director redefine the current objectives, goals set in the Employee Wellness Program dated July 1, 2006, and the Wellness Action Plan dated January 16, 2008. Objectives need to be measured and recorded in a balanced scorecard format in order to drive continuous improvement. The Health and Wellness Director and Safety Director should collaborate to report aggregate data as outlined in recommendation 3 to the Central Core Committee and the NDDOT on a quarterly and yearly basis.
- 2. Assess health and wellness programs from a cost benefit perspective. Determining the return on investment for a wellness program can be difficult to retrieve, especially on a short-term basis (Louise Esola, 2008. *Business Insurance*). However returns have proven successful in wellness programs.

A review of 32 studies of corporate wellness programs found claims costs reduced by 62.5 percent, disability costs reduced by 34.4 percent, and incidence of injury declined by 24.8 percent (www.aurorahealthcare.org).

Perform a cost benefit analysis of the business plan to include BCBS healthcare costs, WSI costs, absenteeism rates, and job satisfaction surveys. This will allow the NDDOT to show a ROI for the health and wellness program, justifying an increased budget allowing for incentives if approved by appropriate officials.

The employee survey questions relating to health and wellness need to tie to the objectives and goals determined in Recommendation 1.

Utilize online health risk assessments, completed confidentially by each employee. This would provide NDDOT essential baseline data for future annual trending for the wellness program. Health risk assessments are accessible through BCBS and other health care organizations.

Information gathered, from the cost benefit analysis and baseline data from the health risk assessments, must be provided to the NDDOT leadership the Wellness Committee, the Health and Wellness Director, and the Safety Director. Based on the data collected, the established objectives and goals in recommendation 1 may need to be adjusted periodically.

3. As part of the workforce assessment, explore partnering Health & Wellness with the Safety Department. Currently, the NDDOT is reactive in addressing injuries and health issues, especially with the employees that work in the field. The NDDOT needs to take a proactive approach in order to review ergonomic, safety and health hazards. By tracking injuries and health issues, the ability to target specific programs for rural and traveling employees will be possible.

The NDDOT Safety and Wellness Programs may benefit from collaborating on common goals and objectives. There are many synergies between the two programs and each program can benefit from measuring performance in healthcare and WSI premiums, frequency, and severity rates.

Recommendations: Other

1. Networking with other professionals in the health and wellness field would be highly beneficial to NDDOT. The NDDOT has very few subject matter experts on successful health and wellness programs for the workplace. The recommendation is to promote health and wellness through networking.

The University of Mary Occupation Therapy (OT) Department has multiple programs that could help promote the wellness program at the NDDOT (University of Mary, Dr. Jeaneen Sibla, OT Director, personal communication, March 13, 2009). All of the programs would be free of charge and paid for with the student's tuition. Below are five options that the University of Mary OT Department could offer the NDDOT:

- Community Partner Projects,
- Independent Study,
- Workshop Involvement,
- Leadership Academy, and
- Phi Theta Episilon Sorority.

Networking with other states having successful Department of Transportation, health and wellness programs will yield benefits for the NDDOT by leveraging existing metrics and creating an effective, legal incentive plans already establishing in best practices within the industry.

NDDOT should broaden the networking scope to include regional or local businesses and health care organizations. Health and wellness program coordinators will be able to share valuable experience and knowledge that may benefit the NDDOT. This could be valuable when reaching out to rural areas, which have limited access to fitness facilities. For example, utilizing a high school gym for wellness activities would be an alternative.

In addition, Healthy North Dakota will be hiring a statewide Health and Wellness Director. The NDDOT is optimistic this new position will increase statewide health and wellness synergies (NDDOT Employee, personal communication, March 6, 2009). This position needs to communicate with successful public sector wellness programs outside of the state and work to network best practices across all state agencies.

- 2. Continue the focus on health and wellness within the NDDOT. Providing the NDDOT leadership with data will enable it to change the culture and climate by provide a clear and concise message. The key is promoting the same message repeatedly until every employee is familiar with and believes in the message. This issue is very simply stated but the fruition will be a great challenge (NDDOT. 2006, January. *Director Letter*).
- 3. Assess communication strategies. One of the greatest challenges within the NDDOT is reaching all of the employees in the state with the same message at approximately the same time. Create a written communication plan in regards to the Health and Wellness Program. This plan must have standardized communication channels that are easily attainable by all NDDOT employees. There should also be standardized daily meetings in which to communicate critical information, these meetings only need to be five to ten minutes in length.
- 4. Increase employee participation. Health and wellness is a benefit to the employee and the employee's health. Empower the NDDOT workforce by providing it with the baseline data and creating personal and group responsibility to manage health and wellness outcomes.

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Objective 4.4: Develop and implement a Workforce Assessment plan. (2008-2013 North Dakota Department of Transportation Strategic Plan)

The Society for Human Resource Management states that workforce assessment and planning involves working through four issues. These steps include "assessing composition and content of the workforce, identifying gaps in the workforce, developing recruitment and training plans, and assessing the value of outside sources"

(http://moss07.shrm.org/hrdisciplines/staffingmanagement/Articles/Pages/CMS_000378.aspx).

In 2006, the State Auditor's Department of Texas released a Workforce Planning Guide. The Guide reflects the process outlined by the Society for Human Resource Management and serves as the foundation for discussion for the balance of this section of this assessment.

Phase I: Determine Agency Strategic Direction.

In part, this has been completed by NDDOT through its 2008-2013 Strategic Plan. However, visionary work is still necessary in projecting the NDDOT of 2013.

It is necessary to create the vision the NDDOT of 2013. What changes are needed in the composition of the workforce? What types of skills, knowledge and abilities will no longer be required, and conversely, what skills will be needed? What skill level is required to replace retirees? What is the desired average age of employee at NDDOT? Average years of experience? What are the acceptable turnover rates?

As part of this vision process, NDDOT is encouraged to think a little differently. The Society for Human Resource Management shares on its website that at a recent talent management conference, Edie Weiner, president of the New York based consultant group Weiner, Edrich, Brown, Inc,

asked attendees to envision today's workforce, then said most probably pictured people 25 to 55 years old and not "very young people" or much older people. She said talent management experts should alter their perspective on both.

In the next decade, one in every nine Baby Boomers will live to be 100 years old," Weiner said. "Why can't we hire someone at the age of 65 who has so many good years left?

Likewise, Weiner called it "criminal" to make a four-year-college degree a job requirement since many potentially high-achieving high school students never go on to college because they can't afford it and drop out of high school instead (http://moss07.shrm.org/hrdisciplines/staffingmanagement/Articles/Pages/EarthtoTMExp erts.aspx).

There are several considerations for NDDOT as it envisions the NDDOT of 2013.

1. NDDOT will likely continue to have an aging workforce, as reflected by North Dakota demographics. This presents interesting dynamics when young people are hired. Efforts to include them in the current work staff, as well as understand motivators specific to this age group, are essential in retaining these employees. Employees from multiple levels within NDDOT may benefit from professional education in working with the younger workforce.

From another perspective, the health aspects of an aging workforce may influence the ability of NDDOT to fulfill responsibilities with the potential increased use of sick leave. Specific health and wellness action steps may be considered to respond to these needs.

2. Reflective of the United States, and somewhat in the state of North Dakota, is a likely increase in ethnic diversity. This will influence workforce culture, work ethic, and relationships in a manner that will necessitate attention. Professional growth opportunities may want to address this area.

The ratio of men to women at NDDOT is approximately 3:1. In the United States, women are over 40 percent of the workforce (http://www.dol.gov/wb/stats/main.htm, April 4, 2009). This illustrates that women are a potentially untapped resource for NDDOT, and initiatives to address this may benefit the department.

3. NDDOT employees have shared in the interviews with the team members that there is increased competition for several categories of employees. At this time, those categories are engineers/ engineering technicians, as well as snow plow operators. Measuring recruitment standards to ensure the most successful are utilized, as well as improving retention for these valuable groups will become increasingly important. The continuation of partnerships and potential growth of more partnerships with the University System may provide numerous benefits to NDDOT.

Additionally, NDDOT may benefit from looking internally for people to become engineers/ engineering technicians. An NDDOT employee responsible for recruiting stated that recruitment efforts have focused externally. When questioned as to the reason, it was stated that "there were issues with a person from before regarding this so we no longer do it." (NDDOT employee interview April 2, 2009)

4. The technology explosion will continue to impact NDDOT. This brings challenges to professional growth and development programs to ensure that employees are able to utilize technology to its fullest capacity. The current group of college graduates is the first to grow up in a home-based computer world. As young graduated numbers increase

- in the workforce, so will their influence in sharing their knowledge, and demanding technology for daily work.
- 5. The impact of the current downturn in the economy is difficult to determine in the number of retirements NDDOT will have in the next five years. Also of consideration is that state government work may become more appealing when compared to private sector work because of its relative stability. Continuing to monitor the recruitment efforts with data including reasons for selecting or not selecting NDDOT as an employer will be crucial.

Phase II: Conduct Workforce Analysis. Some portions of the workforce analysis are completed, and have been detailed in the sections of this report analyzing objectives 4.1, 4.2, and 4.3. A complete analysis is not possible until a vision of the future is developed in order to assess the gaps NDDOT will be facing.

There are four steps within Phase II: analyze current workforce supply, analyze demand, analyze the gaps, and develop strategy. Within Phase II, the first activity is to analyze supply by determining a profile of the current workforce.

Step 1: Analyze Current Workforce Supply

The NDDOT has its workforce spread statewide, based in eight locations. The majority of the workforce is based in the Central Office in Bismarck, North Dakota. Currently 72 percent of the workforce is above the age of 41 and 25 percent of the workforce will be eligible for retirement in the next three years based on the rule of 85.

A number of benefits are available to NDDOT employees including overtime, tuition reimbursement, scholarships for those interested in engineering and related fields, along with sign-on and retention bonuses.

Turnover rates are highest among employees in the 31-40 year old age bracket with a 14 percent turnover rate. The lowest turnover rates are found in employees in the 41-50 year old bracket with four percent turnover. The most common reason cited for leaving is "Other employment including transferring to another state agency."

One of the trouble areas identified was in hiring for areas in the northwestern part of the state. To help with this the NDDOT offers sign-on bonuses for select positions in this region.

There are strong correlations between the recommendations provided for objectives 4.1, 4.2, and 4.3 that drive the following recommendations for implementation of a Workforce Assessment Plan. From the review of objectives 4.1, 4.2, and 4.3, four recommendations are highlighted to benefit the study of supply in the current workforce.

Recommendation 1: Establish consistent data collection processes for all activities. In establishing a Workforce Assessment Plan, there must be data for comparison purposed. Of note in objectives 4.1, 4.2 and 4.3 was the lack of a consistent evaluation system. In order to validate the effectiveness of programs, standards and expectations for the program must be identified and tools established that measure the stated standards and expectations. In reviewing NDDOT materials, it is common to find that even when measurable goals had been established, they were not being measured. To assess the knowledge, skills, and abilities and actual supply of the current workforce, quantitative data is essential.

Examples of measurable data are provided in the recommendations sections for each objective. For employee recruitment and retention, the team recommends the establishment of a "quality of hire" questionnaire to assess recruitment effectiveness. Tracking the method of recruitment and recruitment's percentage of success in gaining quality individuals can be very beneficial in increasing the effectiveness of recruitment activities.

The professional growth and development programs do not consistently evaluate the opportunities provided. Outcomes for the programs are not established. Attendees are either not provided with an evaluation tool, or do not complete one. The Business Writing course has an evaluation that could provide a foundation for a consistent evaluation tool, and used for all educational opportunities. A consistent evaluation tool will provide the metrics required for measurement in a Workforce Assessment Plan.

A number of health and wellness programs are offered, with no standard evaluation occurring. While there are measurable objectives established, and health and wellness input is sought from NDDOT employees, the survey tools are not reflective of the measurable objectives.

Recommendation 2: Establish baseline levels to evaluate program effectiveness. Upon completion of at least one year of data collection, the NDDOT must establish baseline levels for each program. Data without standards is simply data. If baseline measurements are created the NDDOT will be better able to demonstrate the effectiveness of its programs to leaders inside and outside the NDDOT. Additionally, the establishment of baselines will allow the NDDOT to quickly identify gaps and make adjustments before problems arise.

The implementation of baseline measures will require regular reviews of new, objective data to determine the appropriateness of the established baselines. If necessary, baseline measures should be adjusted using historical trends or averages over the past 3-5 years.

Recommendation 3: Data should be collected for a minimum of one year to establish a baseline before analyzing for gaps between the NDDOT of today, and NDDOT of 2013.

At this time, employees are surveyed every two years regarding job satisfaction, but this data is highly subjective. To complement the employee survey, objective data is required to quantify target areas to address within NDDOT.

Once identified, a Workforce Assessment Plan can be detailed to address the areas of highest need. Remain sensitive to limited budgets so the combination of subjective and objective data will drive the initiatives that will provide the highest return on investment with greatest impact. As a resource, the University of Mary Leadership Academy is often available at no charge for agencies such as NDDOT. Other resources may be found at the doctoral level of North Dakota universities.

Recommendation 4: Institute career tracking as a means of assessing effectiveness of programs, improving retention, and identifying current employees to fill needed roles in the NDDOT of 2013.

NDDOT is currently working to implement the PeopleSoft Enterprise Learning Management (ELM) system. This system will perform the task of tracking all courses available to NDDOT employees. ELM will track employee demographic information to include attendance, learning outcomes, employee evaluations, job locations, and career advancements.

ELM can be an excellent tool in obtaining measurable data to use in the Workforce Assessment Plan. The team recommends that Human Resources provides extensive training for those in supervisory positions so administrators can leverage the greatest possible benefit from this tool. Proactively managing with individual employee objectives at the forefront will improve employee satisfaction and retention. Identifying concerns before they become issues can allow the organization to succeed with greater ease and lower costs.

For the purposes of workforce assessment, ELM can be an invaluable tool in identifying individuals to be trained to address the emerging needs determined to be gaps in NDDOT's employee pool

Step 2: Analyze Demand. Once current supply has been thoroughly analyzed, an accurate picture of the demands on the NDDOT workforce can be developed. Analyzing the demands is Step 2 of Phase II in conducting the workforce analysis.

A review of current data available from a review of Objectives 4.1, 4.2, and 4.3 indicate the following demands.

- (1) A potential need for the NDDOT will be engineering technicians. At the time of this writing, 30 percent of the engineering technicians employed will be eligible for retirement over the next five years.
- (2) An interview conducted with a NDDOT employee who is primarily responsible for recruiting indicated four main foci for recruitment:
 - Professional candidates or those with four-year degrees. This area of focus is primarily civil engineers.
 - Technical candidates or 2-year engineering certificates. This area focuses on engineering technicians and surveying crews.
 - Administrative support including secretaries, office assistants, and drivers license staff.
 - Skilled craftsmen or experienced snow plow drivers and tenured diesel mechanics.

It is cautioned that this is an assessment of demand in today's workforce. The actual workforce demands must be based on the demands of the workforce of 2013.

Step 3: Analyze the Gaps. Step 3 of Phase II consists of identifying the gaps. While a thorough assessment of the gaps is not possible at this time, the workforce assessment conducted in Objective 4.1, indicates that NDDOT will likely experience shortages in engineering technicians in the next few years.

The shortages currently being experienced in the northwestern part of the state are likely a cyclical issue. As demand for skilled laborers and engineers in the region increases, the NDDOT is likely to see a shortage in this area because its pay scale is lower than the private sector.

When the actual assessment is completed, the focus needs to be the long term needs as of 2013, and not getting involved in the immediate workforce needs at NDDOT.

Step 4: Develop strategy. The final step in Phase II is to "develop strategy to reduce shortages and surpluses in the number of staff and needed skills."

Currently the NDDOT offers a number of training opportunities for its employees in addition to tuition reimbursement and scholarships for qualified employees. These benefits provide the NDDOT an opportunity to create a variety of career tracks for its employees. By developing a career path that encourages workers to obtain a college degree in an engineering-

related field in exchange for years of service, the NDDOT would be able to hire and retain younger employees.

The Health and Wellness Program is another area for growth for the NDDOT. The program was initiated in 2006. Since 2006 the program has grown and evolved. The program has worked to develop awareness of the need for healthy choices and provided employees with opportunities to participate in health screenings. The Health and Wellness Program has reached a critical point. The program needs to move into an action-oriented phase. By becoming more active, the NDDOT will reduce employee attrition and reassignment related to injury, reduce injury-costs, reduce absenteeism rates and time lost due to injuries, and save money on healthcare. This savings could be redirected to other areas in the NDDOT.

Final Phases of Workforce Assessment

Upon development of the strategy, NDDOT may progress to Phase III which is implementing the workforce plan. When implementing the Assessment Workforce Plan, communication with staff members is critical. This is the time to implement strategies that will address the gaps and surpluses determined in Phase II,

Finally, NDDOT will move into Phase IV which is to monitor, evaluate, and revise the plan. In addition to assessing the positive and negative aspects of the plan, NDDOT must proactively envision the future and address organizational issues affecting the workforce. (http://sao.hr.state.tx.us/Workforce/guide.html).

References Cited

Personal Communication, NDDOT Employee Interview April 2, 2009

http://sao.hr.state.tx.us/Workforce/guide.html).

Appendices 4.1

Data Chart 4.1

2007 A	verage Annual Wages	for North Dakota by County
Rank	County	Average Wage
1	Oliver	\$48,931
2	Slope	\$48,644
3	Mercer	\$46,776
4	Williams	\$41,598
5	Sargent	\$41,471
6	McLean	\$37,107
7	McKenzie	\$36,680
8	Cass	\$36,395
9	Burleigh	\$34,735
	Statewide average	\$33,086
10	Burke	\$32,282
11	Sioux	\$32,164
12	Pembina	\$31,898
13	Richland	\$31,894
14	Grand Forks	\$31,647
15	Stark	\$31,150
16	Morton	\$30,772
17	Foster	\$30,154
18	Stutsman	\$29,649
19	Ward	\$29,462
20	Billings	\$28,854
21	Benson	\$28,826
22	Mountrail	\$28,776
23	Cavalier	\$28,774
24	Renville	\$28,618
25	Bowman	\$28,576
26	Rolette	\$28,482
27	Steele	\$28,237
28	Traill	\$28,069
29	McHenry	\$28,000
30	Bottineau	\$27,096
31	Ramsey	\$27,091
32	Barnes	\$27,007
33	Dunn	\$26,609
34	LaMoure	\$26,511
35	Adams	\$26,269
36	Dickey	\$26,137

37	Walsh	\$26,073
38	Ransom	\$26,001
39	Hettinger	\$25,371
40	Pierce	\$24,933
41	Divide	\$24,589
42	Towner	\$24,575
43	Emmons	\$24,265
44	Kidder	\$23,944
45	Griggs	\$23,347
46	Nelson	\$23,209
47	Eddy	\$23,157
48	Grant	\$23,084
49	Golden Valley	\$22,576
50	McIntosh	\$22,316
51	Wells	\$22,221
52	Sheridan	\$21,444
53	Logan	\$20,782

Figure 4.1

Average ND Salaries/County (2007)

1	Oliver	\$48,931
2	Slope	\$48,644
3	Mercer	\$46,776
4	Williams	\$41,598
5	Sargent	\$41,471
6	McLean	\$37,107
7	McKenzie	\$36,680
8	Cass	\$36,395
9	Burleigh	\$34,735
	Statewide	\$33,086

Data Chart 4.2

Bench- mark	Match Title	# Inc	Min	Midpt	Max	Actual Low	Avg	Actual High	State	ND Class Cd
1100	Engineering Technician IV (2004)	48	31,056	41,412	51,768	34,728	42,087	50,340	ND	CL2004
1105	Transportation Project Manager (2015)	42	33,816	45,084	56,352	42,624	46,043	51,708	ND	CL2015
1110	Transportation Senior Manager (2016)	21	36,984	49,308	61,632	45,432	53,365	59,508	ND	CL2016
1115	Transportation Engineer I (2021)	27	31,056	41,412	51,768	40,200	43,228	45,672	ND	CL2021
1120	Transportation Engineer II (2022)	26	36,984	49,308	61,632	48,252	51,044	56,088	ND	CL2022
1125	Transportation Engineer III (2023)	57	40,656	54,204	67,752	50,664	60,087	67,752	ND	CL2023
1135	Facility Construction Engineer (2065)	1	44,976	59,964	74,952	62,652	62,652	62,652	ND	CL2065
1140	Environmental Engineer II (2042)	10	36,984	49,308	61,632	37,680	49,348	53,772	ND	CL2042
1145	Environmental Engineer III (2043)	14	40,656	54,204	67,752	51,144	57,146	64,128	ND	CL2043
1155	Hydrologist Manager I (2059)	5	44,976	59,964	74,952	60,132	67,286	72,108	ND	CL2059
1160	Admin. Transportation Engineer II (2025)	16	56,004	74,664	93,336	82,536	84,137	85,980	ND	CL2025
1165	Chief Transportation Engineer (2030)	1	77,352	103,140	128,928	105,096	105,096	105,096	ND	CL2030
1175	Geologist III (2083)	5	44,976	59,964	74,952	45,000	54,108	62,280	ND	CL2083
1195	Engineering Technician IV (2004)	48	31,056	41,412	51,768	34,728	42,087	50,340	ND	CL2004
1100	ENGR/PHYS SCI TECH II	160	45,348	55,212	65,076	45,612	56,821	65,076	СО	CL2004
1105	ENGR/PHYS SCI TECH III	114	49,980	60,864	71,748	51,828	66,967	71,748	СО	CL2015
1110	CIVIL ENG PROJ MANAGER I	37	57,864	70,464	83,064	64,608	73,838	83,064	со	CL2016
1115	ENGINEER-IN-TRAINING I	34	48,924	59,562	70,200	48,924	56,187	68,244	СО	CL2021
1120	PROFESSIONAL ENGINEER I	245	65,508	79,782	94,056	66,504	85,840	94,056	СО	CL2022
1125	PROFESSIONAL ENGINEER II	150	77,544	94,410	111,276	79,644	102,841	111,276	СО	CL2023
1135	PROFESSIONAL ENGINEER II	150	77,544	94,410	111,276	79,644	102,841	111,276	со	CL2065
1140	PROFESSIONAL ENGINEER I	245	65,508	79,782	94,056	66,504	85,840	94,056	СО	CL2042
1145	PROFESSIONAL ENGINEER II	150	77,544	94,410	111,276	79,644	102,841	111,276	СО	CL2043
1155	PROFESSIONAL ENGINEER II	150	77,544	94,410	111,276	79,644	102,841	111,276	СО	CL2059
1160	MANAGEMENT-SES (Regional Transp Dir)	6	79,944	112,410	144,876	123,600	129,540	133,800	со	CL2025
1165	MANAGEMENT-SES (Chief Engineer)	1	79,944	112,410	144,876	135,840	135,840	135,840	со	CL2030
1115	Transportation Engineer laters	16	30 600	E2 400	67 547	40.622	E1 004	67.547	14	CI 2024
1115 1120	Transportation Engineer Intern Transportation Engineer	16 34	38,688 50,378	53,102 64,137	67,517 77,896	40,622 56,950	51,284 72,510	67,517 77,896	IA IA	CL2021 CL2022
	, ,		•					·		
1125 1135	Transportation Engineer Spec Facilities Engineer 2	74 8	58,323	74,017	89,710	67,371	87,981	89,710	IA IA	CL2023 CL2065

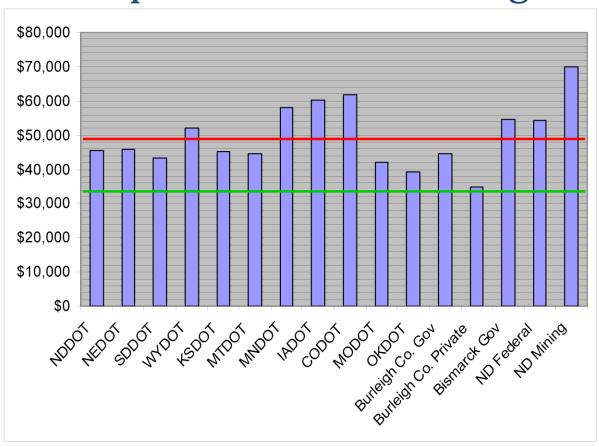
			55,578	70,554	85,530	78,478	83,665	85,530		
1140	Environmental Engineer	33	45,677	58,261	70,845	45,677	66,184	70,845	IA	CL2042
1145	Environmental Engineer Senior	22	55,578	70,554	85,530	82,410	85,114	85,530	IA	CL2043
1160	Transportation Engineer Admin	15	68,598	83,117	97,635	87,922	96,988	97,635	IA	CL2025
1165	Highway Division Administrator	1	105,830	128,118	150,405	150,405	150,405	150,405	IA	CL2030
1175	Geologist 3	28	47,299	60,081	72,862	49,421	67,960	72,862	IA	CL2083
1100	Transportation Generalist Senior	419	37,772	43,347	48,922	37,772	48,233	48,922	MN	CL2004
1105	Transportation Specialist	425	39,902	47,220	54,539	46,270	53,954	54,539	MN	CL2015
1110	Transportation Operations Supv 3	20	48,734	61,001	73,268	56,522	70,011	73,268	MN	CL2016
1115	Engineer 2 Graduate	45	43,389	51,292	59,195	43,389	51,219	59,195	MN	CL2021
1120	Engineer Senior	209	52,701	64,216	75,732	52,701	71,263	75,732	MN	CL2022
1125	Engineer Principal	181	56,961	71,013	85,065	63,955	83,687	85,065	MN	CL2023
1135	Engineer Principal	181	56,961	71,013	85,065	63,955	83,687	85,065	MN	CL2065
1140	Engineer Senior	209	52,701	64,216	75,732	52,701	71,263	75,732	MN	CL2042
1145	Engineer Principal	181	56,961	71,013	85,065	63,955	83,687	85,065	MN	CL2043
1155	Engineer Principal	181	56,961	71,013	85,065	63,955	83,687	85,065	MN	CL2059
1160	Engineer Principal Administrative Trans	16	75,398	91,757	108,117	108,117	108,117	108,117	MN	CL2025
1165	Transportation Division Engineer	4	84,063	102,166	120,269	108,346	108,346	108,346	MN	CL2030
1100	TECHNICAL ASSISTANT III	9	28,596	34,404	40,212	28,596	31,436	34,644	МО	CL2004
1105	TECHNICAL ASSISTANT IV	16	32,256	39,120	45,984	32,256	36,704	41,712	МО	CL2015
1115	CONSTRUCTION INSPECTOR INTERMEDIATE CONSTRUCTION	84	38,208	45,012	52,500	38,916	41,480	45,852	МО	CL2021
1120	INSP	58	42,600	50,568	58,812	43,380	46,759	52,500	МО	CL2022
1125	AREA ENGINEER	29	61,056	72,480	84,480	63,432	71,925	79,776	МО	CL2023
1135	DESIGN ENGR III	6	55,548	67,638	79,728	60,324	67,976	71,544	МО	CL2065
1140	ENVIRONMENTAL ENGR II	73	44,220	54,246	64,272	44,220	47,540	56,688	МО	CL2042
1145	ENVIRONMENTAL ENGR III	42	51,156	62,112	73,068	51,156	55,253	64,272	МО	CL2043
1155	STRUCTURAL HYDRAULICS ENGINEER	1	65,868	78,240	91,236	68,436	68,436	68,436	МО	CL2059
1160	DISTRICT ENGINEER	10				98,424	100,295	109,896	МО	CL2025
1165	CHIEF ENGINEER	1				131,448	131,448	131,448	МО	CL2030
1175	GEOLOGIST IV	5	47,184	58,566	69,948	49,104	51,372	52,200	МО	CL2083
1100	Civil Engineering Technician	52	26,426	33,033	39,640	34,611	34,729	36,067	MT	CL2004
1105	Civil Engineering Technician	118	31,712	39,640	47,568	40,685	42,873	45,323	MT	CL2015
1110	Construction Trades Worker	117							MT	CL2016

	Sup/Manager		28,989	36,237	43,484	36,234	45,086	48,714		
1115	Civil Engineering Specialist	37	34,583	43,228	51,874	40,684	43,705	61,852	MT	CL2021
1120	Civil Engineering Specialist	97	41,499	51,874	62,249	45,419	54,996	81,282	MT	CL2022
1125	Civil Engineering PE	14	49,799	62,249	74,699	54,246	61,544	65,062	MT	CL2023
1140	Environmental Engineering Specialist	17	43,205	54,006	64,807	46,051	58,375	65,187	MT	CL2042
1145	Environmental Engineer PE	19	51,846	64,807	77,769	65,062	74,490	78,894	MT	CL2043
1160	Civil Engineering PE	14	49,799	62,249	74,699	54,246	61,544	65,062	MT	CL2025
1165	Operations Manager	1	72,021	90,026	108,031	106,600	106,600	106,600	MT	CL2030
		100							NE	
1100	Highway Construction Technician II	132	28,947	34,459	39,969	28,947	31,086	39,882	NE	CL2004
1105	Highway Construction Technician III		35,285	42,226	49,165	35,285	40,179	49,165	NE	CL2015
1110	Highway Construction Tech IV/Sup	13	43,224	52,152	61,079	45,408	49,774	59,528		CL2016
1115	Engineer I		41,868	48,936	56,002	41,868	42,212	44,574	NE	CL2021
1120	Engineer II	36	41,868	51,035	60,199	41,868	47,152	60,199	NE	CL2022
1125	Engineer III	38	50,950	59,619	68,288	53,514	62,259	72,879	NE	CL2023
1135	Engineer III	38	50,950	59,619	68,288	53,514	62,259	72,879	NE	CL2065
1140	Environmental Engineer II	6	43,324	53,288	63,249	44,437	50,504	63,249	NE	CL2042
1145	Environmental Engineer III	13	50,068	61,580	73,091	51,235	67,552	73,233	NE	CL2043
1160	Highway District Engineer	7	77,443	84,321	91,198	91,198	92,400	98,534	NE	CL2025
1165	Engineer/Deputy State	1	83,250	98,272	113,293	118,025	118,025	118,025	NE	CL2030
1100	TRANSPORTATION TECHNICIAN II	F.C.	04.400	20.402	25.204	22.202	00.000	22.400	OK	CI 2004
1100	TRANSPORTATION TECHNICIAN II	56	21,122	28,163	35,204	23,383	26,399	32,466	OK	CL2004
1105	TRANSPORTATION TECHNICIAN III	72	23,234	30,979	38,724	29,229	31,133	36,397	OK	CL2015
1110	TRANSPORTATION TECHNICIAN IV	1	25,730	34,307	42,884	37,804	37,804	37,804	OK	CL2016
1115	ENGINEER INTERN I	14	25,730	34,307	42,884	38,391	38,391	38,391	OK	CL2021
1120	PROFESSIONAL ENGINEER II	40	41,906	55,874	69,843	54,029	57,858	59,762	OK	CL2022
1125	PROFESSIONAL ENGINEER III	25	46,934	62,578	78,223	59,532	61,677	68,345	OK	CL2023
1140	PROFESSIONAL ENGINEER II	40	41,906	55,874	69,843	54,029	57,858	59,762	OK	CL2042
1145	PROFESSIONAL ENGINEER III	25	46,934	62,578	78,223	59,532	61,677	68,345	OK	CL2043
1155	PROFESSIONAL ENGINEER III	25	46,934	62,578	78,223	59,532	61,677	68,345	OK	CL2059
1160	ENGINEERING MANAGER IV ENVIRONMENTAL PROGRAMS	14	67,721	90,295	112,869	77,520	85,204	87,299	OK	CL2025
1175	SPEC III	114	30,920	41,227	51,534	30,920	43,298	48,812	OK	CL2083
1100	Journey Transportation Technician	60	26,608	33,260	39,912	29,942	33,074	34,911	SD	CL2004
1105	Project Technician	42	29,039	36,299	43,559	35,767	37,375	42,052	SD	CL2015
1115	Transportation Engineer	19	20,000	00,200	-0,000	55,707	01,010	-12,002	SD	CL2013

			35,863	44,829	53,794	41,468	43,681	44,850		
1120	Transportation Project Engineer	68	39,804	49,755	59,706	45,748	51,135	59,675	SD	CL2022
1125	Transportation Engineering Supervisor	32	49,706	62,133	74,559	56,954	62,912	67,912	SD	CL2023
1135	Building Engineer II	12	44,412	55,515	66,618	47,799	54,469	61,847	SD	CL2065
1140	Natural Resources Project Engineer	24	39,804	49,755	59,706	48,066	49,945	52,263	SD	CL2042
1145	Natural Resources Engineering Director	11	49,706	62,133	74,559	61,242	65,982	73,108	SD	CL2043
1155	Natural Resources Engineering Director	11	49,706	62,133	74,559	61,242	65,982	73,108	SD	CL2059
1160	Region Engineer	4	66,412	83,015	99,618	83,015	83,329	84,269	SD	CL2025
1165	Chief Engineer	1	60,726	75,907	91,089	70,340	70,340	70,340	SD	CL2030
1175	Geology Specialist	4	44,412	55,515	66,618	55,520	58,976	65,845	SD	CL2083

Figure 4.2

Comparison to ND Average



2008 10-state raw data (provided to dot1).xlsx Data Chart 4.2

Sector Average
ND State Average
11D Otato / Worago

Figure 4.3

Comparison by Classification

Benchmark	Match Title	# States	# Inc	Actual Low	Average	Actual High	State	Var
1100	Engineering Technician IV (2004)		48	34,728	42,087	50,340	ND	14.29
		9	1,313	32,545	36,861	41,480		14.2
1105	Transportation Project Manager (2015)		42	42,624	46,043	51,708	ND	- 6.0%
		9	1,243	38,530	43,429	48,154		0.07
1110	Transportation Senior Manager (2016)		21	45,432	53,365	59,508	ND	-0.39
		7	468	47,621	53,503	58,431		-0.57
1115	Transportation Engineer I (2021)		27	40,200	43,228	45,672	ND	-4.9%
		10	310	41,347	45,468	52,299		
1120	Transportation Engineer II (2022)		26	48,252	51,044	56,088	ND	40.0
		10	911	51,465	60,744	69,395		-16.0
1125	Transportation Engineer III (2023)		57	50,664	60,087	67,752	ND	-18.5%
		10	699	62,915	73,711	80,002		
1135	Facility Construction Engineer (2065)		1	62,652	62,652	62,652	ND	-15.8
		8	461	64,862	74,399	79,221		-15.8
1140	Environmental Engineer II (2042)		10	37,680	49,348	53,772	ND	-18.7
		10	787	50,631	60,678	68,441		-18.7
1145	Environmental Engineer III (2043)		14	51,144	57,146	64,128	ND	22.0
		10	510	64,912	75,058	80,365		-23.9
1155	Hydrologist Manager I (2059)		5	60,132	67,286	72,108	ND	40.4
		5	368	66,562	76,525	81,246		-12.1
1160	Admin. Transportation Engineer II (2025)		16	82,536	84,137	85,980	ND	-11.3
		10	105	90,992	94,859	98,415		-11.3
1165	Chief Transportation Engineer (2030)		1	105,096	105,096	105,096	ND	0.000
		9	12	115,377	115,377	115,377		-8.99
1175	Geologist III (2083)		5	45,000	54,108	62,280	ND	40.7
		7	225	51,828	60,566	66,340		-10.79

Measuring The Quality of Hire

SHRM Briefly Stated ROI Series

4/1/2006

Fast Fact

On average, companies that did a better job of attracting, developing and retaining highly talented managers earned 22% higher return to shareholders. $^{\rm 1}$

Companies are facing competition for top employees as high employee turnover and growth in the economy mean the number of job openings is outstripping the available supply of the most talented employees. This means the search for top talent will intensify as organizations come up with new ways to attract and retain their best and brightest employees in an increasingly competitive market. As companies devote increasing resources to the recruiting function and the pool of applicants becomes tighter, measuring the effectiveness of the recruiting function will increase.

One way to measure recruiting effectiveness is by measuring the quality of new employees that were

hired. Since recruiting top talent points to the recruiter's ability to source and screen for top skills, recruiters should take credit for it. Quality of hire metrics reveal several aspects about an organization's human capital and recruiting function.

First, this measure helps organizations capture the strength of its human capital. Some quality measures actually track key technical skills that are of strategic importance for an organization. For example, if an organization wants to venture into new technologies, it may want to know how many new hires have this specific skill. New-hire quality measures are also a way for recruiters to justify the sourcing strategies they choose and recruiting costs they pay. For example, while an executive search firm is an expensive recruiting source, it may be more effective, compared to low-cost recruiting sources, in identifying and recruiting high-impact hires, such as a sales director. In essence, quality of hire communicates what value the organization is getting for the recruiting money it is spending.

Quality of hire can also help organizations understand candidate profiles that are more likely to succeed on the job. By identifying the knowledge, skills and abilities (KSAs) of successful hires and crafting interview questions to assess these skills, hiring mangers can increase the likelihood of strong hires. Once recruiters identify what KSAs are most successful, they can incorporate this information into the job descriptions for future positions.

HR professionals can also use quality of hire information to understand what selection techniques are more effective. For example, it may be found that structured interviews with several interviewers yield better hires than when only one manager conducts the interview.

In addition, quality of hire may be used over time to evaluate the assessment and interviewing skills of hiring managers. When a manager consistently hires individuals who have low-quality performance, this could mean that the hiring manager may have unrealistic performance expectations for the position or that he or she may need additional interviewing training.

Because quality of hire can mean different things to recruiters and hiring managers, there is usually no standard metric or objective measure for quality from organization to organization. The best way to figure out what to include when capturing quality of hire is to determine why the organization wants to collect the data in the first place. Quality of hire can be used to assess 1) how well the recruiting function performs; 2) the depth and breadth human capital talent; and 3) hiring managers' interviewing and selection abilities. Potential areas for measuring quality of hire are listed below.

Potential areas of measurement of prospective employees' quality 2,3

- They perform well on pre-employment testing.
- They currently have a job.
- They get at least one counter offer from their current employer.
- They are hard to convince to take the position.

Potential areas of measurement of new employees' performance 4,5

- Their performance and qualifications with respect to the job requirements.
- Their general performance.
- Their time to achieve full contribution.
- Their compatibility with the organization's customers, work group and organization.

- Their overall attitude.
- Turnover.

Disagree

Potential areas of measurement of the quality of hire with regard to the recruiting function ^{6,7}

- The hiring manager's satisfaction with the new employee.
- The new employee's performance and qualifications with respect to the job requirements.

When creating a survey to measure quality of hire, it is important to keep it relatively brief so that hiring managers will take the time to complete it. A survey with no more than four to seven questions can sufficiently ascertain quality of hire. In order to translate these responses to actual metrics, one might consider placing responses on a five-point rating scale from strongly disagree to strongly agree.

can sufficiently ascertain quality of nire. In order to translate these responses to actual metrics, one might consider placing responses on a five-point rating scale from strongly disagree to strongly agree.
Sample Questionnaire for Quality of Hire
Congratulations on your new hire. In order to improve the organization's hiring processes, please indicate to what degree you agree with each of the following statements.
1. The new employee meets the requirement of the position, as described in the job description.
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
2. The new employee began making a meaningful contribution within the expected time frame for the position filled.
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
3. The new employee fits in well with the organizational culture.
Strongly disagree

Neither agree nor disagree

Agree

Strongly agree

4. The HR department was very helpful in fulfilling this position.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

For organizations that conduct performance reviews at regular intervals, the mid-year performance appraisal for new hires can also be used in conjunction with the hiring manager survey. Other areas of measurement within HR that will help inform the quality of hire and the quality of the hiring process are turnover, both voluntary and involuntary. Turnover data should be collected and evaluated at regular intervals. In addition to organizational turnover, measuring turnover data based on departments, managers or directors can inform HR of whether managers or directors are meeting performance objectives or whether there is a disconnect in organizational and employee objectives within a department. Valuable information can also be taken from performance appraisals.

While the value of human capital is only now beginning to register with Wall Street analysts, it has long been a primary concern of talent acquisition managers. The cost of bad hires can far outweigh the extra costs spent on recruiting the right hires. Bad hiring decisions can reduce employee satisfaction and productivity and increase turnover and errors, all of which eventually impact an organization's value to its shareholders. Over time, bad hires can lead to decreased customer service, decreased sales and eventually decreased market share.

The importance of collecting data about an organization's most important asset--its human capital--will continue to increase. New approaches to calculating the worth of human capital are allowing staffing managers to communicate the quality of their hires as well as the efficiencies of the recruiting processes. Like all human capital measures, quality of hire should not stand alone. Rather, HR professionals should use this metric in conjunction with other measures to provide a balanced assessment of their organizations' human capital.

Resources

Estimating the Financial Value of Staffing-Assessment Tools

www.workforce.com/archive/article/23/40/88.php

Hiring Manager Quality Survey

www.workforce.com/section/06/article/23/54/22.html

Lermusiaux, Y., & Snell, A. (2004). *Quality of hire: The next edge in corporate performance.* Retrieved March 27, 2006, from www.taleo.com/research/pdf/Whitepaper Quality of Hire.pdf

Sullivan, J., & Burnett, M. (2004). *Measuring quality of hire--The ultimate recruiting metric* [Hiredesk white paper]. Retrieved March 27, 2006, from

www.hiredesk.com/info/CA_CO_Measure_QOH/default.asp

Endnotes

- ¹ Michaels, E., Handfield-Jones, & Axelrod, B. (2001). *The war for talent.* Cambridge, MA: Harvard Business School Press.
- ² Sullivan, J., & Burnett, M. (2004). *Measuring quality of hire--The ultimate recruiting metric* [Hiredesk white paper]. Retrieved March 27, 2006, from www.hiredesk.com/info/CA CO Measure QOH/default.asp
- ³ Lermusiaux, Y., & Snell, A. (2005). Quality of hire [SHRM white paper]. Retrieved March 27, 2006.
- ⁴ Quality of hire: How companies are crunching the numbers. (2004, July). *Workforce Management Online*. Retrieved March 26, 2006, from www.workforce.com/archive/article/23/77/61.php
- ⁵ Lermusiaux, Y., & Snell, A. (2004). *Quality of hire: The next edge in corporate performance*. Retrieved March 27, 2006, from www.taleo.com/research/pdf/Whitepaper_Quality_of_Hire.pdf
- ⁶ Quality of hire: How companies are crunching the numbers. (2004, July). *Workforce Management Online*. Retrieved March 26, 2006, from www.workforce.com/archive/article/23/77/61.php
- ⁷ Lermusiaux, Y., & Snell, A. (2004). *Quality of hire: The next edge in corporate performance.* Retrieved March 27, 2006, from www.taleo.com/research/pdf/Whitepaper_Quality_of_Hire.pdf

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Appendices 4.2

New E	mployee Orientation V	Vorkshop										
1.	Quality of Content											
	Poor	Fair		Good	Excellent							
2.	Describe the present	Describe the presenter's knowledge of the subject matter:										
	Limited	(2)	(3)	(4)	Extensive							
3.	Did the presenter ex matter?	plain the concep	ts, principles, o	or techniques i	n an understandable							
	(1) Seldom	(2)	(3)	(4)	Consistently							
4.	Would you recommend the presenter to others?											
	Yes	No										
5.	Were you able to or	will you be able	to apply the co	ncepts (inform	nation) of this workshop?							
	Never	Rarely	Sometir	nes	_ Frequently							
6.	Would you recommo	end this program	to others?									
	Yes	No										
7.	Please explain one t	hing you learned	during this wo	rkshop:								
8.	Explain one thing yo	u would change o	or improve on:									
9.	Add any other comm		-									

Course Review

Course Instructor (if available):

Course Evaluation/Feedback:

Internal Analysis

Did the course meet its objective?

Is the content of the course relevant to your job?

Do you feel you gained valuable knowledge from the course?

Do you have a suggestion to make this training better?

External Analysis: To be completed by seminar class.

What other companies are doing and are they working.

Attendees:

Title:

Location:

Years of Service:

Number of times attended course:

Cost Per Attendee:

How does ND DOT management evaluate course need?

Course Description:

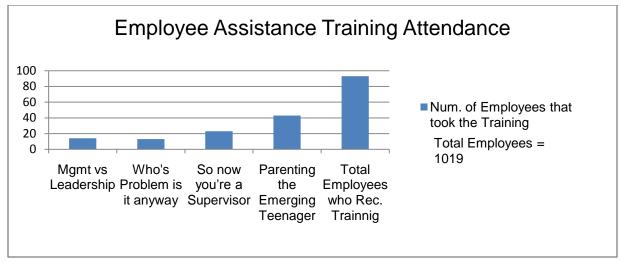
General Course Overview:

Maximum number of attendees allowed in each course session?

Do course sessions meet maximum capacity?

SWOT Analysis: To be completed by seminar class.

Recommendations: To be completed by seminar class.



Num. of Employees that took the Training

Mgmt vs Leadership	14
Who's Problem is it anyway	13
So now you're a Supervisor	23
Parenting the Emerging Teenager	43
Total Employees who Rec. Trainnig	93

^{*} Source of information came from attendance sheets provided by NDDOT

NDDOT Mentee Participation Data

Total Participants since inception: 126

District	Participant Number	Percentage
Central Office	50	39.7%
Bismarck	2	1.6%
Valley City	2	1.6%
Devils Lake	8	6.3%
Minot	5	4.0%
Dickinson	25	19.8%
Grand Forks	2	1.6%
Williston	6	4.8%
Fargo	7	5.6%
Unknown	13	10.3%
Repeat Mentee	3	2.4%

Source: NDDOT Evaluation Forms

NDDOT Engineers vs PE Review Course Data

Description	# People
Total # Engineers	151
Number PE Certified Engineers	85
Number EIT Certified Engineers	55
Total # Engineers taking course	13
Engineers with no certification	11

Source: NDDOT Personal Communications, NDDOT employee

Appendix 4.3

Figure 4.3-1 Figure is part of NDDOT. 2006, January. *Employee Wellness Program Action Plan* attached below.

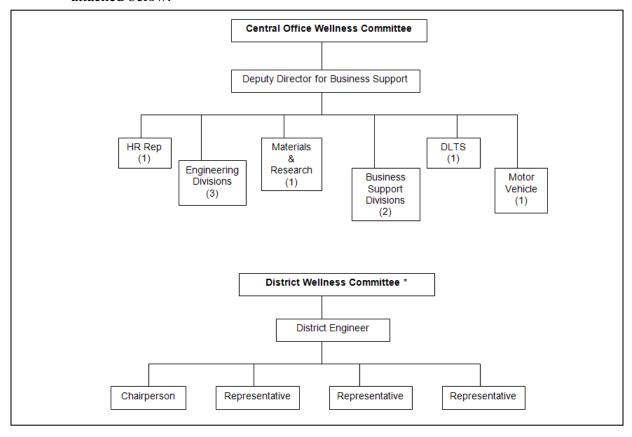
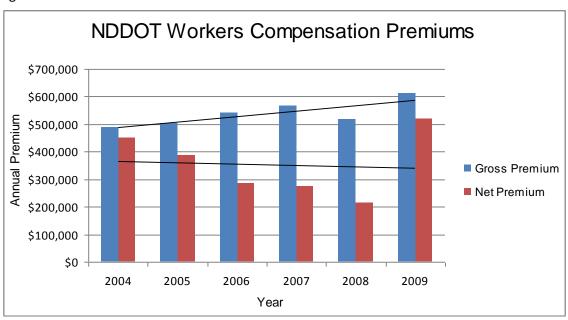


Figure 4.3-2

Health Fair Participation Site

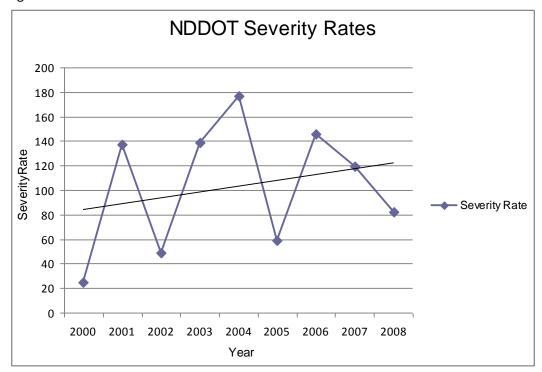
A total of 454 individuals attended one of nine health fairs conducted in December 2007, May 2008 or December 2008. One health fair in December 2008 was cancelled due to weather and has not yet been rescheduled. Figure 4.3.2 shows attendance by site and region.

Figure 4.3-3



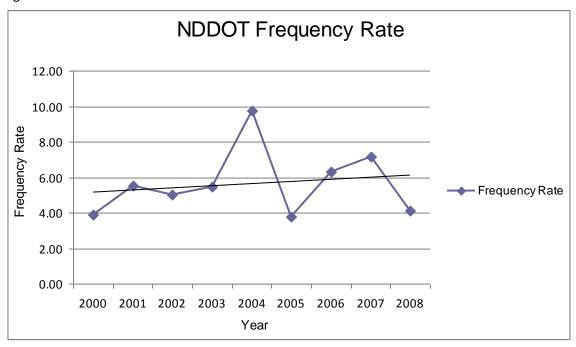
	Gross		WSI Div	RM Div	
Year	Premium	RM Discount	Discount	Discount	Net Premium
2004	\$487,957	8%	0%	0%	\$448,920
2005	\$502,713	13%	10%	0%	\$387,089
2006	\$540,061	10%	40%	2%	\$285,152
2007	\$564,748	15%	40%	4%	\$274,467
2008	\$518,782	17%	50%	0%	\$215,294
2009	\$611,002	18%	0%	0%	\$519,832

Figure 4.3-4



Year	Severity Rate		
2000	25		
2001	137		
2002	49		
2003	139		
2004	177		
2005	59		
2006	146		
2007	119		
2008	82		

Figure 4.3.5



Year	Frequency Rate
2000	3.89
2001	5.50
2002	5.00
2003	5.46
2004	9.73
2005	3.79
2006	6.30
2007	7.16
2008	4.12

NDDOT. 2006, July, Employee Wellness Program

Agency: North Dakota Department of Transportation

Author: Human Resources Division

Contact Person: Marlene Larson **Group:** Personnel Policies

Category: Other Policy Number: X-3

Title: Employee Wellness Program

Original Date:06/30/2005

Revised Date: 07/012005 **Review By Date:** 07/01/2006

Employee Wellness Program

Description

The Primary Goal of the Department of Transportation's (DOT) Wellness Program is to improve the health, well-being and productivity of all DOT employees. To that end, we envision a work environment that fosters and maintains individual fitness of both mind and body.

The DOT Wellness Program exists to provide continuous encouragement and assistance to employees, through voluntary participation in program activities, in achieving and maintaining a healthier lifestyle through environmental and policy change, wellness education, and events provided at the worksite.

Expected results from the Wellness Program are changes in pre- and post-assessments of participation records, health risk appraisal assessments and satisfaction surveys to show a positive increase in attitude and behavior toward a healthy lifestyle.

Wellness Committees

The Department's Wellness Committee shall evaluate the effectiveness of the department-wide wellness program, make recommendations on wellness-related activities that are appropriate throughout the Department of Transportation, and provide guidance and direction to the Districts' and Central Office's Wellness Committees. Department Wellness Committee members include:

- Wellness Program Coordinator (Human Resources Division representative)
- Central Office Representatives (Engineering Divisions, Office of Business Support Divisions, and Driver and Vehicle Services Divisions)
- District Representatives (1 per District)
- Public Affairs Representative

Each District and the Central Office will establish Wellness Committees to coordinate wellness-related activities tailored for their employees. Representatives from the Central Office (3) and one representative from each District Wellness Committee will be members of the Department's Wellness Committee.

The suggested make-up of the Central Office Committee may include a representative from the Human Resources Division, 3 from Engineering Divisions, 1 from Materials and Research, 2 from Office of Business Support Divisions, 1 from Drivers License and Traffic Safety, and 1 from Motor Vehicle.

Each District Wellness Committee will consist of a minimum of 4 individuals (to include a committee chairperson). The suggested makeup of the committee may include representatives from Administration, Maintenance, Construction, the Shop, and the Sections.

The Central Office and each District's Wellness Committee shall conduct an appropriate number of facilitated meetings to carry out specific wellness plans for their site. Wellness Committee members may:

- Determine types of activities to be included in the wellness program through development of a Central Office and individually-tailored District Wellness Plans;
- Prepare an application for PERS Wellness Benefits Funds (grants);
- Develop, promote and implement wellness activities;
- Form appropriate subcommittees to implement wellness activities;
- Decentralize responsibility for and availability of wellness programs to all DOT locations;
- Determine how DOT issues affect the wellness program and make recommendations to agency administration.

Wellness Coordinator / Human Resources Division

The Human Resources Division administers the Wellness Program for the Department. Administration includes developing a budget for department-wide funded activities.

Responsibilities include: Organizing and implementing department-wide wellness activities suggested by the employees and the Wellness Program Coordinator; technical support and assistance for District/Central Office committees; contracting for department-wide services such as biennial wellness screenings/health fairs; developing and updating this policy and department-wide guidelines; and networking with other state agencies and public/private wellness programs to foster collaborative efforts in worksite wellness activities.

Wellness Activities

The Department's Wellness Committees, in conjunction with appropriate managers and officials, plan and implement activities supporting the primary goal of the Wellness Program. These activities are grouped in the following areas:

Screening - including, but not limited to, administering a periodic employee needs assessment, program evaluation and participant status.

Physical Activity - including, but not limited to, ongoing fitness classes, weight control group meetings, and extended educational programs.

Life Style Education - including, but not limited to, newsletters, health fairs, one time seminars, brown bag lunches.

Participation by Employees and Family Members

All employees are eligible for voluntary participation in the wellness activities program. Family members are encouraged to participate as long as their participation does not preclude the participation of a DOT employee, or is at no direct cost to the Department. Family members will not be eligible for any incentive awards.

Employees and family members are encouraged to become involved in appropriate activities consistent with their interests, capability, and condition. Some individuals may wish to consult their physician prior to starting a program, particularly one that involves vigorous physical activity.

Supervisors are encouraged to support the Department's Wellness Program and allow employees the opportunity to arrange their work schedules, with appropriate coverage, to participate in Wellness events.

Employees and family members who participate in department-sponsored activities, whether paid by the Department or the individual, must sign a "Waiver of Liability, Indemnification, and Medical Release" form.

Providers of Instruction

Providers of instruction or services for the wellness program will include health educators, nutritionists, mental health professionals, certified fitness instructors, qualified yoga instructors, and registered massage therapists. Only persons with accepted degrees or recognized training/certification will be selected. All providers' qualifications will be reviewed by the Wellness Coordinator to ensure the highest standards are met. All leaders of vigorous exercise will meet all required criteria including current CPR certification, personal liability insurance, and certification from an appropriate fitness instructor certifying agency.

In the case a DOT employee meets the requirements for becoming a provider of services, that employee may charge a fee to participating individuals if the services are delivered during non-working hours, such as lunch or after work. In no case will DOT employees provide services during the time they are being paid by the state or if the services are in violation of Personnel Policy II-4, Conflict of Interest. The division director or district engineer must be aware and approve in advance the employee-provided wellness service.

Providers of wellness-related services, if not under contract, must complete a State Risk Management "Facilities Use Agreement" with the Department. Providers will be responsible for all business aspects, including collection of fees from employees, addressing complaints, and other business-related issues.

DOT Wellness Program Budget and Costs

The Human Resources Division (HRD) will budget and administer funds necessary for the implementation of department-wide activities. HRD will also coordinate the purchase, inventory, and disposition of supplies, materials, and programs for Central Office Committee activities funded through the NDPERS Wellness Program approved for the Central Office.

District Office managers shall coordinate the purchase, inventory, and disposition of supplies, materials, and programs for District Wellness Committee activities funded through the NDPERS Wellness Program approved for the District.

Standard DOT accounting procedures will be followed for the receipt and remittance of fees.

Facilities and Time

Department facilities may be used for Department-sponsored or approved activities, provided such use does not displace other mission critical activities.

While it is anticipated that most employees will participate in wellness fitness activities during breaks and non-work hours, employees may utilize paid work time to:

- Participate in Department-sponsored wellness screenings;
- Attend approved wellness classes or events scheduled during work hours;
- Participate in a ½-day yearly wellness event for District or Central Office employees.

Employees will restrict personal wellness activities to non-work hours. However, based on work requirements and authorization of supervisor, employees may flex their schedule to:

- Compensate for additional time to work out during the lunch hour; or
- On a limited basis, flex the lunch hour period to participate in a wellness activity that takes place outside of the normally-scheduled lunch hour.

Evaluation

The Human Resources Division will be responsible for evaluating wellness activities and will determine the appropriate evaluation tool for the event (i.e., employee survey; numbers attended, etc.). At least annually a review of health care costs, Family and Medical Leave use, sick leave use, etc., will be conducted to evaluate the impact of the Wellness program.

DISCLAIMER: North Dakota Department of Transportation (NDDOT) Personnel Policies are not intended as a contract of employment and do not constitute one. NDDOT may change, delete, suspend, or discontinue any policy or benefit described herein at any time with or without prior notice.

NDDOT. 2006, January. Employee Wellness Program Action Plan.

Department of Transportation Employee Wellness Program Action Plan

Executive Summary

The North Dakota Department of Transportation Employee Wellness Program will encompass the Central Office, the eight district offices, and the outlying section operations.

Employees

Our 1000+ employees are our customers. Over 50% of our employees are engaged in very physically active duties (Maintenance, Maintenance Shop, and Construction). Because of the physical nature of most of the Department's jobs, the potential for injury, opportunities for eating healthy, and availability of wellness-related functions make it difficult for employees to actively adhere to a healthy lifestyle. In response, the Department has implemented a Wellness Program under the direction of the Human Resources Division in cooperation with the Districts to promote activities and behavior that lead to an improvement in employee health.

The Human Resources Division shall work with a team of volunteers to develop strategies and ideas designed to bring about lifestyle changes and assist in evaluating the effectiveness of program results.

In addition, each District will create a Wellness Planning team to identify needs and opportunities unique to that district yet within the umbrella of the overall NDDOT Wellness Program.

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis Strengths:

- Support of executive and middle management
- Enthusiastic staff
- Access to print shop and Grapevine
- Dedicated budget
 - PERS Wellness Benefits funding also available to Districts and Central Office
- Networking with other wellness programs
- Wellness intranet site
- Health Fair contract with the American Red Cross
- Member of Wellness Councils of America

Weaknesses:

- Slow to get activated
- Lag between implementing & results
- Geographic barriers (Sections geographically separated from district offices)
- Volunteer committee members and HR staff have other commitments
- Older employee workforce
 - o 79% are 40+ years old
- Lack of visibility in organizational marketing
- Reluctance by some employees to participate (though they will benefit)

Opportunities:

- Use bulletin boards, Grapevine, and e-mail to post wellness messages
- Can narrow the scope of programs to impact greater numbers of employees
- Use of DOT facilities for in-house exercise classes
- Partner with Traffic Safety on wellness activities
- Wellness challenges/activities can be planned and carried-out on a quarterly basis
- Make available incentives that will encourage employees to initiate and maintain wellness lifestyles
- Can partner with North Dakota Worksite Wellness program at the Health Department and UND's Workforce Development Center
- Use expertise and enthusiasm of Central Office and District wellness committees to conduct employee wellness activities

Threats:

- Competition for attention
 - Television
 - Computers
 - o Family and work-related priorities
- Lack of convenience
- Weather
- Traveling schedule

- Resistance to participating by some employees (denial that they need to get involved)
- Costs for participating in some activities, i.e. Fitness Express

Wellness Programs and Services

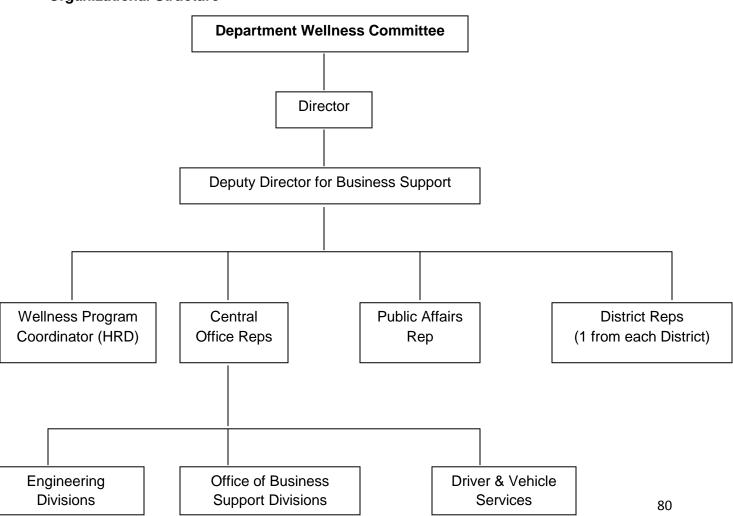
The Department's Wellness Committees, in conjunction with appropriate managers and officials, plan and implement activities supporting the primary goal of the Wellness Program. These activities are grouped in the following areas:

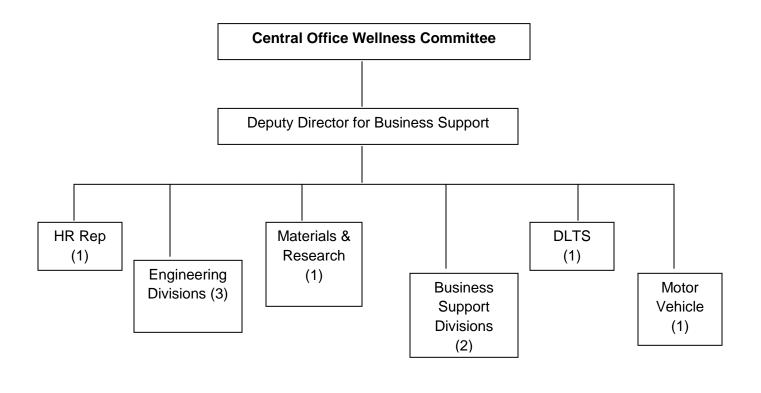
Screening - including, but not limited to, administering a periodic employee needs assessment, program evaluation and participant status, and identifying individual baselines and areas to improve.

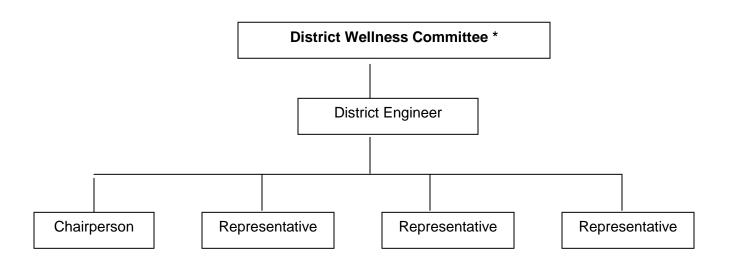
Physical Activity - including, but not limited to, ongoing fitness classes, weight control group meetings, extended educational programs and incentives for meeting goals.

Life Style Education - including, but not limited to, newsletters, health fairs, one-time seminars, brown bag lunches, healthy recipes, and NDDOT intranet wellness site.

Organizational Structure







^{*} District Wellness Committees will have a minimum of 4 members, including a chairperson. Representatives may come from Administration, Maintenance, Construction, Maintenance Shop, and the sections. A district's committee may be composed of more than 4 individuals.

Program Administration

The Human Resources Division administers the Wellness Program for the Department. Administration includes developing a budget for department-wide funded activities.

Responsibilities include: Organizing and implementing department-wide wellness activities suggested by the employees and the Wellness Program Coordinator; technical support and assistance for District/Central Office committees; contracting for department-wide services such as biennial wellness screenings/health fairs; developing and updating the wellness policy and department-wide guidelines; and networking with other state agencies and public/private wellness programs to foster collaborative efforts in worksite wellness activities.

Mission / Vision / Objectives

Mission

The mission of the Department of Transportation's Wellness Program is to decrease the health risks of employees while empowering them to be conscientious health care consumers. Wellness teams create programming that will help individuals reach their maximum wellness potential. The program encourages employees to take responsibility for enhancing their own well-being, decreasing their risks for acute and chronic illness and premature death, knowing when to seek appropriate care for medical problems, and acquiring knowledge tools for achieving high level wellness.

Vision

The vision of the Department of Transportation's Wellness Program is that all employees will choose healthy lifestyle behaviors and work in a safe, productive environment. NDDOT encourages healthy lifestyles and provides equal opportunities for all employees to develop healthy patterns in their daily lives. These healthy lifestyle behaviors will reduce injuries both on and off the job, decrease costs, decrease absenteeism, reduce presenteeism, and increase employee productivity and job satisfaction and allow employees to fully achieve their potential and enjoy life to the fullest.

Measurable Outcome/Impact Objectives for 2006

The following objectives reflect activities for the DOT Central Office Wellness Program. They can be used as a generic model for DOT Districts when developing their wellness plan. These objectives are written to relate to the various categories of wellness activities that can be offered

through this wellness plan. Each District and the Central Office should submit their own specific, measurable objectives that relate to their plan, and the needs of their employees.

- 50% of DOT employees returning surveys from the 2006 employee survey results will report they are aware that the Wellness Program is available at DOT.
- 50% of employees returning the 2006 surveys will report that having the Wellness Program available contributes to a more positive work climate.
- 50% of employees returning the 2006 survey will report that they have participated in at least one wellness activity.
- By the end of 2006, at least 90% of employees who have participated in "Awareness" activities will report that the activities increase their knowledge about healthy lifestyle behaviors.
- By the end of 2006, at least 50% of employees who have participated in "Awareness" activities will report that the activities increase their motivation to adopt healthy lifestyle behaviors.
- 50% of employees who regularly participated in "Lifestyle Change" activities will report that they maintained the activity for at least 3 months. 40% of employees who regularly participated in "Lifestyle Change" activities will report that they maintained the activity for at least 6 months.
- By the end of 2006, at least 70% of DOT employees will report that the Wellness Program is sensitive to the needs and interests of employees.

Market Analysis

Over 80% of the U.S.'s present illness burden is a result of chronic illness occurring between the age of 55 and the age of death. Current age of death in the United States is averaging 75 years -- or 20 years of chronic illness before death. National health officials are struggling to postpone the onset of chronic infirmity more rapidly than the age of death. (1)

Data from the June 2005 *NDPERS Payroll Conference* identified that 80% of PERS healthcare dollars are spent for 20% of its members. The ultimate goal is to help the 80% of employees who are relatively healthy and reduce future costs.

April 2005 payroll demographics show that NDDOT has 24% female and 76% male employees. 8% of employees are between the ages of 18 and 29, while 92% are age 30 or older. Because the trend for chronic illness starts at age 55, it is in the best interest of the Department to initiate and encourage maximum employee participation in wellness activities. (2)

- (1) U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
- (2) North Dakota Department of Transportation Employee Information by Department ID (Division), Bismarck, ND. May 2005.

Employee Assessment of Physical Health and Well-Being (3)

Listed below is data from the Department's 2004 organizational health survey, identifying risk behavior, health goals, and preferred wellness activities.

(3) Upper Great Plains Transportation Institute. *Reassessment of North Dakota Department of Transportation Organizational Health*. North Dakota State University, Fargo, ND, September 2004.

		Yes	No
1.	I exercise moderately for at least 30 minutes three or more days a week.	333	284
2.	I smoke cigarettes or use other tobacco products.	140	481
3.	I am exposed to secondhand smoke.	322	294
4.	I am more than 20 pounds over my ideal weight.	328	290
5.	I limit my intake of fat, sugar, and salt.	370	248
6.	I practice some type of stress management on a regular basis.	239	376
7.	I maintain my blood pressure within recommended limits.	542	79
8.	I have had a bout of back pain in the last six months.	260	361
9.	I wear a seat belt all the time when I am in a motor vehicle.	504	115
10.	I have at least three drinks containing alcohol every day.	23	598
11.	I eat breakfast every day.	324	296
12.	I usually consult a medical self-care book or helpline when I am sick.	182	436

Specific Health Goals

- 1. Reduce body fat (439)
- 2. Improve cardiovascular fitness (418)
- 3. Feel better overall (394)
- 4. Increase strength and endurance (384)
- 5. Reduce stress (357)
- 6. Improve nutritional habits (341)
- 7. Control cholesterol (248)
- 8. Improve mental health (219)
- 9. Reduce back pain (188)
- 10. Increase safety awareness (129)
- 11. Stop tobacco usage (105)
- 12. Reduce alcohol consumption (30)

Motivation to Participate in Wellness Programs

- 1. Convenience / location (419)
- 2. Improved health (354)
- 3. Incentives (269)
 - a. Gym membership (250)
 - b. Financial (163)
 - c. Flex time (129)
 - d. Prizes (28)
- 4. Time of Day (218)
 - a. After work (184)
 - b. During lunch (71)
 - c. Before work (62)
- 5. Health promotion events at worksite (193)
- 6. Family participation (121)
- 7. Peer support (89)

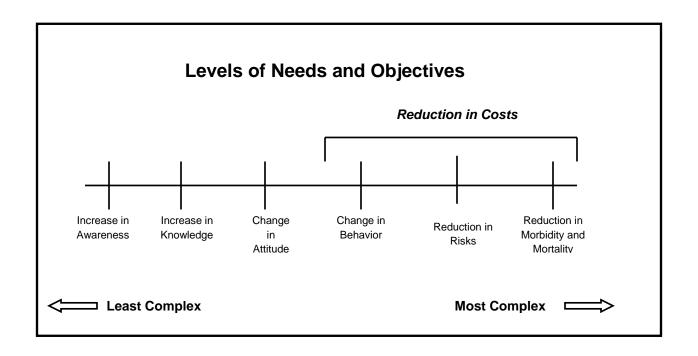
Preferred ways of receiving health information

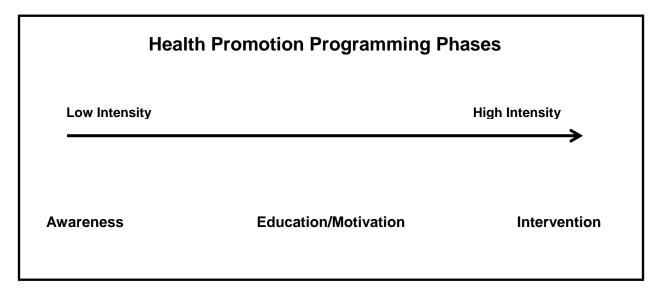
- 1. Presentations by experts (seminars) (283)
- 2. Pamphlets and other written materials (262)
- 3. Classes and courses (229)
- 4. Screenings (211)
- 5. Films and videos (186)
- 6. Employee assistance programs (174)
- 7. Internet/Intranet (167)
- 8. Contests and incentive programs (129)

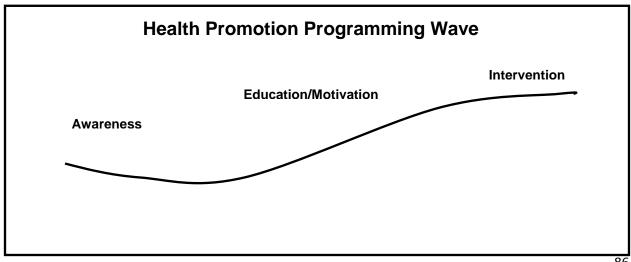
Marketing (Promotion) Strategy and Tactics (4)

It's accepted that few people are willing or will make major changes in their lifestyle today to reduce the risk of chronic illness that might occur 20 years down the road. To get employees to make positive changes in their behavior, they first need to be made aware of the daily habits influencing their health. Most employees need specific information on how to make changes or they need some sort of motivation to try a new healthy behavior.

In order to reach all employees at some level of readiness for change, our promotion programs will include awareness, education/motivation, and intervention activities. "One approach is to provide the activities in a programming "wave" in which the initial activities are low-level and build to high-level interventions. This approach will also encourage gradual changes in daily living habits." (4)







"Planning and Scheduling Health Promotion Activities

<u>Awareness Phase</u> This phase is designed to reach large numbers of people (employees, spouses and retirees). The purpose is to raise peoples' consciousness about and interest in the ways in which daily living habits can affect health and well-being. Very basic information is often provided and as such, one cannot expect that these activities will cause positive behavior changes. Awareness activities usually have low per person costs." (4)

- Posters
- Paycheck messages
- Pamphlets/booklets
- Grapevine
- Intranet wellness site
- E-mail articles
- Environmental changes
 - Flex-time to allow exercising
 - o Smoke-free worksite
 - Healthier snacks in coffee shop

"Education/Motivation Phase Participation in education/motivation phase activities usually requires a little more effort on the part of the employee. In return however, employees usually benefit more by obtaining the intensive information and/or individualized feedback about their health status that is offered by education/motivation phase activities." (4)

- Resource room/library
- Displays
- Health fairs/screenings
- Videos/films/slide shows
- Brown-bag lunches/seminars
- Support groups
- Challenges
 - Weight-loss challenge
 - Smoking cessation challenge

"Intervention Phase Intervention activities usually reach a small number of highly motivated employees, some of whom may be at "high risk" for certain diseases. But because intervention activities usually provide intensive instruction, individualized monitoring, feedback and support, they are the most likely to promote substantial health behavior changes within employees. The activities require considerable effort (time, energy and possibly money) and commitment from the employees." (4)

Courses

Individual counseling

Advertising, Promotion, Public Relations

Maximizing Employee Participation

Making plans for wellness activities is well and good, but it only counts if employees participate. "Thus, another key element to implementing a health promotion program is promoting or "advertising" the program activities to employees." (4)

- Focus on one topic at a time
- Use as many different types of activities as possible for each topic (see "Planning and Scheduling Health Promotion Activities")
 - Awareness
 - Educational materials
 - Intervention
- Use different methods for promoting activities
 - Grapevine
 - Memos
 - Bulletin board announcements
 - Promotional posters
 - Health activity/challenge promotion committee
 - Voice mail
 - o E-mail
 - Intranet wellness site
 - Meetings
- Use incentives to get employees involved
 - o Everyone who achieves a goal should receive something
 - Consider offering participation incentives
 - Door prizes
 - Healthy snacks
 - o Do not offer incentives for the "best" or "most"
 - Competition should be directed at positive health-related goals, not for "most weight lost" etc.
 - o Incentives don't always have to be fitness related
 - Incentives can be used to promote the Department's wellness program
 - Pens, notepads, t-shirts with wellness logo
- Make health promotion activities FUN!
 - Nobody ever dropped out of a program because it was too much fun
- (4) *Health Promotion Director Certification Training Program*. The Cooper Institute. Dallas, Texas. September 2004.

NDDOT Wellness Operating Budget

In FY 2006 PERS began charging a 1% surcharge on all employee health insurance premiums to agencies that did not have an employee wellness program. The Department of Transportation executive staff elected to take an equivalent amount of funds and dedicate them to the wellness program.

The Human Resources Division will administer a portion of these dollars for Department-wide functions, such as biennial health fairs and wellness screenings, and centrally purchased

supplies. Some funds will be allocated to the eight districts and Central Office for use in locallydetermined wellness activities.

Each district and the Central Office may apply to PERS for annual Wellness Benefits funds as another source of funding. Wellness Benefits applications must specify an activity or service that applies to as many employees as possible. Upon approval by PERS, recipients can either direct-bill PERS or request reimbursement for funds spent on PERS-approved functions. (HRD strongly recommends PERS be direct-billed because reimbursements will not be re-credited to the appropriate district or Central Office. All reimbursements must be turned over to Finance for deposit into the Department's special funding account.)

NDDOT. 2006, July. Director's Statement

Director's Statement

January 18, 2006

To all NDDOT employees:

The fact is that all of us can make changes to our lifestyle which can produce enormous results in terms of our overall health and enjoyment of life. It is also a fact these changes are difficult and require significant individual commitment and effort. It is well established that employers can make a positive boost to each individual through programs at work that provide information, resources, and recognition of individual efforts.

I plan to be an active participant in the program and hope that each of you join me. Together we do those things that make us healthier and lead to greater enjoyment.

It is for that reason I endorse this program and set aside the resources to bring about success.

Sincerely,

David A. Sprynczynatyk, P.E. Director

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Appendix E: Supporting Documents 4.4

State Auditor's Office John Keel, CPA State Auditor

Workforce Planning Guide February 2006 Report No. 06-704